

# BUTANE-PROPANE

HEADQUARTERS FOR LP-GAS  
INFORMATION SINCE 1931

# News

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Now Anchor offers highest quality Butane-Propane . . . distribution facilities and service which are fast and efficient. Anchor is an aggressive, well-integrated organization seasoned by years of team-work with the industry . . . And Through the Years Anchor continues to offer the best of products and the best of service. For your Butane-Propane requirements—large or small—you'll do better to Call Anchor First . . . Every time . . .

ANCHOR PETROLEUM COMPANY ATLAS LIFE BLDG. TULSA, OKLA.

AUGUST, 1949—50c per Copy

You know the Hackney RC-100A\*

—with its money-saving light weight,  
due to high-strength steels



*Now meet its BIG BROTHERS!*



Lightweight Hackney Model PC-420A  
—made of high-strength steels—  
420 lbs. propane capacity



Lightweight Hackney Model PC-300A  
—made of high-strength steels—  
300 lbs. propane capacity

Both cylinders can be furnished with or without  
connections for float gauges—they conform  
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When you standardize on Hackney L-P Gas Cylinders, you profit by a complete line—and all the advantages inherent in a variety of cylinders. You benefit by undivided responsibility—and from an experienced producer of compressed gas cylinders.

Here are two larger members of this dependable Hackney Cylinder family—the Hackney PC-420A and PC-300A. Like the famous RC-100A, these large cylinders are made of high-strength steels. They give you the same comparatively light tare weight—with all its cost-saving advantages. Handling is easier and faster. Freight costs to destination are cut to a minimum with a resultant drop in delivered cost.

But whether your needs call for these giant cylinders, the popular RC-100A or one of the small 5 lb. capacity industrial type cylinders, it will pay you to draw on the extensive experience of our engineers in the L-P Gas field. They will be glad to work with you in determining the *right* sizes and types of containers for your needs. Write for full details.

\*: 60 lb. propane capacity.

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DIV. OF TRAVELER

**PRESSED STEEL TANK COMPANY**  
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CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

WITH THESE *little* METERS, MISTER—



Furnished with 1/2" side female pipe tap connections. Male threaded tap connections optional. Size 8" x 7-1/2" x 19-1/2". Weight only 9 lb.

*you're really in the  
GAS BUSINESS*

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**No. 00**

**LP-GAS**

**METER**

WITH PRESSURE CAST ALUMINUM ALLOY CASE

**ECONOMICAL TO BUY AND  
MAINTAIN, SAFE TO USE**

The No. 00 meter is especially designed for measuring LP-gas from bottle gas sets, storage tanks and distribution systems. Made with strong, tough lightweight, pressure cast aluminum alloy case, good for 5 psi working pressure. Won't corrode or rust. Meter is easy to handle, economical to ship. Only one external gasketed surface to seal. Built for accuracy and long life. Ample capacity. Write for bulletin 1163.

Gas meters identify your business with the gas business. Your customers and potential customers are already sold on meters. They don't quibble over meter readings as they may gauge readings. And meters are more accurate; present no opportunity for errors that cost you money. Too, they effect many economies. For example, with meters you can pipe several adjoining services from a single tank; schedule truck deliveries to suit your convenience, not the customers.

Metered service is also a strong selling point for new customers. With meters you can offer service comparable to any utility. In today's competitive fuel market, can you afford to be without them?

**A REPAIR PLAN TAILORED TO  
LP-GAS DEALERS' NEEDS**

There's no need to shy away from metering because of anticipated repair difficulties. We've streamlined that procedure, too. After a period of years, the complete measuring mechanism of the No. 00 can be replaced as a unit using only ordinary tools.



Showing how entire working unit lifts from meter case for speedy, economical replacement.

**PITTSBURGH EQUITABLE METER DIVISION**  
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PITTSBURGH 8, PA.

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Lynn C. Denny, Editor; Edward K. Titus, Eastern Editor; Paul Lady, West Coast Editor;  
Ted Shields, News Editor; O. D. Hall, Mid-Continent Editor; Fred L. Dalton, Art Editor.  
Jay Jenkins, President and Publisher; James E. Jenkins, Secretary-Treasurer; Robert C.  
Johnson, Advertising Manager; Robert C. Horton, Circulation Manager; Gene Masters, Research.

August, 1949

Volume 11

Number 8

BUTANE-PROPANE News is published monthly. Copyright 1949 by Jenkins Publications, Inc., at 198 So. Alvarado St., Los Angeles 4, California. Subscription price: United States and U. S. Possessions, Canada, Mexico, Cuba, South and Central American Countries (in advance), 50¢ per copy, one year \$2.00; two years, \$3.50; three years, \$5.00. All other countries \$3.00 per year. By air mail \$8 per year, in U. S. only. Entered as second-class matter May 29, 1939, at the post office at Los Angeles, California, under the Act of March 3, 1879. Member of Audit Bureau of Circulation.

Publishers: G.A.S., The Magazine of the Gas Utility Industry; HANDBOOK BUTANE-PROPANE GASES; THE BOTTLED GAS MANUAL; Annual BUTANE-PROPANE News CATALOG; B-P News BULK PLANT DIRECTORY; WESTERN METALS.



## LETTERS

● **BUTANE-PROPANE** *News* welcomes letters from our readers, but it must be understood that this magazine does not necessarily concur in opinions expressed by them.—Editor.

Gentlemen:

We would be pleased to be informed about the use of propane gas for welding. We know it can be used for brazing, lead melting and cutting (replacing acetylene), but can it replace acetylene for welding purposes?

E.L.T.

Netherland, West Indies

Liquefied petroleum gas is not satisfactory as a substitute for acetylene in welding steel, as the flame temperature is not sufficiently high.

It can be used for welding aluminum and other lower melting point metals.

Special tips are required when propane is used in a welding or cutting torch.—Ed.

Gentlemen:

I am interested in the establishing for my bottled gas business a system whereby a person that uses more of the gas will be able to purchase it for a lesser amount of money.

This is the way the electric companies do and it seems to be a more fair way to do it.

Do you have any suggestions as to how some of the other fellows in the same line might do this?

T. P.

Ohio

Both the electric and the gas utilities use a method of graduated rates to increase load.

This is based on the fact that they have a fixed investment in delivery and manufactur-

ing facilities and an increase in load can be delivered cheaper than the initial amount.

Many LP-Gas dealers are using incentive rates. One method is to have a set of prices depending upon the size of delivery. Another is to have a set of prices depending upon the size of the consumer's tank. This is done to increase the size of consumer storage, provide larger vaporizing surface to operate more appliances and to help balance the winter load by making a large fill in the summer.—Ed.

Gentlemen:

Is it necessary to dig up and retest an underground tank each five years it is buried?

We have heard that it is, but Pamphlet 58 fails to mention it.

R.B.G.

Iowa

There are no codes requiring the retesting of underground tanks, be they for use with butane or propane. Several years ago the Liquefied Petroleum Gas Association examined several hundred underground tanks in an effort to determine the length of time necessary for corrosion to set in or other damage to occur. They found a minimum of corrosion, and as some of these tanks had been buried for upwards of 20 years, it would seem that their life is of long duration in average soils.

However, it must always be remembered that certain soils will cause corrosion faster than others, and if you have any intimation that corrosion has set in on any of your buried tanks, it would be a good policy to test them even though no law requires it.

It is possible that some individual states may have laws covering such testing. You can find out about this from your state association or by addressing your secretary of state.—Ed.

Gentlemen:

We are writing for any information you may be in position to give in

regards to loss in handling of butane gas.

We have a 30,000 gallon capacity storage and have checked very close for leaks, and feel sure there are no leaks at our bulk plant.

Our tank truck is 1000 gallon capacity and the only leak we have is a very small leak once in a while around the pump glands. Our delivery truck is also equipped with a new meter, yet we have a 10% loss in our gas at all times. This is a new meter, in fact, the second meter we have installed and it checks the same amount lost. We recently ran a gallonage test on our meters and found them to be delivering the correct amount of gas. We have run these tests anywhere from two weeks to six months.

We will appreciate your opinion or any information concerning the above losses.

G.B.B.

Georgia

A loss of 10% is inordinately high.

In the winter time you can expect a loss due to the low temperature of the gas. From Page 51 of the "Handbook Butane-Propane Gases" you can determine this by using the correction factors for temperature change.

If you are incurring losses of this magnitude, you should make a complete check of your method of inventory and disbursements. We would suggest that you run a daily inventory control, correcting for temperature, for a period covering receipt and disbursement of at least two car or truck receipts, checking your tank contents before and after each delivery to your tank truck and the morning and evening.

It is possible that your tank calibration is not correct, your gauging device may be off, and you may not be emptying your cars or trucks completely. A daily check should give a clue to your outage.—Ed.

Gentlemen:

We have a country residence where they are using propane gas with the following appliances: 1 60,000 Btu venter heater; range; 1 unvented bath-

room heater, about 10,000 Btu. All of these appliances are burning perfectly as near as we can tell, and the gas and air adjustments are all right, but these appliances are discharging a soot, similar to regular coal soot.

This residence has recently been remodeled and is now very tight, with no outside ventilation coming in around windows or doors.

The house throughout is becoming blackened, even in rooms where there is no gas appliance. You can even see streamers of soot in places.

We have carefully checked the appliances and the vent on the 60,000 Btu heater and it is open, with a good draft.

This condition was noticed only a few days ago, but the appliances have been in use a period of approximately two to three years; therefore, don't believe it could be the appliances, but we are wondering if there could be something in the propane causing this condition. The tank was refilled about the middle of December.

E.B.

New Mexico

Liquefied petroleum gas appliances correctly adjusted with a sufficient air supply burn with a clean, blue flame and do not produce soot.

If soot is forming it is due to one of two things. Impingement of the flame on a cold surface or an insufficient supply of air to support complete combustion.

The fact that the house has been recently sealed tight makes it entirely possible that the gas appliances, after continued use, are burning up the oxygen, resulting in incomplete combustion.—Ed.

Gentlemen:

We have several slants on a problem and need some actual facts so are appealing to you for the information on the thing.

It has been pointed out in a number of instances that it is not wise to use propane as a motor vehicle fuel but only a butane mix. On the other hand, our company fills its fuel tanks

from its tanks, be it propane or butane and seems to have no trouble.

We understand that one manufacturer says you should use only butane mix in its engines. We have heard that you can use propane vapors just as well as the butane mix liquid; others claim that you starve the motor and do run a big chance of burning out the valves.

Please, what are the actual facts about it.

J.S.B.

California

Propane, butane or mix can be used for motor fuel.

The heavier the fuel, the better the power. If a carburetor is set to operate satisfactorily on normal butane and propane is used, a lean mixture will be produced which might burn valves.

When a radical change in fuel is made, the air-gas ratio should be adjusted.—Ed.

Gentlemen:

For a number of years we have been buying propane in 100 pound cylinders. Now we are ready to set up a small bottling plant to fill our own cylinders.

For storage, we arranged with a manufacturer to fabricate three 500-gallon water capacity propane spheres with 200 lbs. working pressure in accordance with ASME specifications.

We have arranged to get our bulk supply of propane in tank truck lots. Our supplier has had years of experience in filling aboveground tanks and advises that ASME fabrications limit relief valve pressure setting to 240 lbs. maximum (full open at 240 lbs.) and in hot summer months

these valves "pop" when refilling tanks. He suggests that we get ICC construction which permits 375 maximum pressure setting.

We again wrote the manufacturer and are advised that "their spheres are designed and fabricated to meet the maximum of 250 lbs. pressure and in most cases 200 lbs. and that they will be unable to meet our requirements at this time."

It seems unlikely that our supplier is mistaken about the valves "popping" when propane is pumped into a warm tank. On the other hand, I notice in BUTANE-PROPANE News that the new sphere of one company is constructed in accordance with API-ASME. The data sheet we have shows a material thickness of .2834 for this code and a thickness of .3429 for ASME as we contemplated.

We have not found this particular point discussed in Handbook Butane-Propane Gases.

Perhaps you can suggest the safest and most satisfactory tanks for us to order.

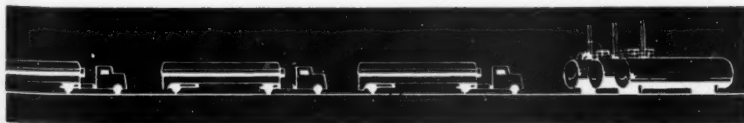
H.E.B.

Michigan

We refer to Pages 287 and 291 of the Handbook Butane-Propane Gases wherein are printed the parts of the NBFU Code applicable to your questions.

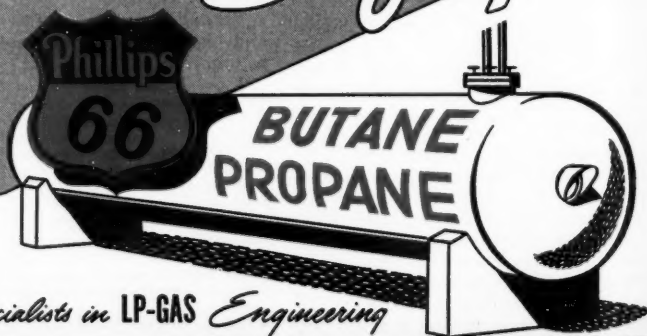
Normally, a 200-pound-per-square-inch working pressure tank is satisfactory for handling propane and the pop valve on an ASME tank is set to start discharging at the tank working pressure and large enough to prevent pressure ever being greater than 125% of the working pressure.

There is no reason for extra high pressures when filling if a vapor return line is used as this will equalize the tank pressure with the pressure in the truck.—Ed.



**Phillips Contract Customers  
benefit by having Practical  
Operating Assistance from  
Phillips Experienced LP-Gas  
Engineers . . . This helps  
assure bulk plant Efficiency  
and**

*Safety*



*Specialists in LP-GAS Engineering*

## **PHILLIPS PETROLEUM COMPANY**

Phillips Division

**SALES DEPARTMENT**

Bartlesville, Oklahoma

District Offices in Amarillo, Tex., Atlanta, Ga., Chicago, Ill., Denver, Colo., Des Moines, Iowa, Detroit, Mich., Indianapolis, Ind., Jackson, Miss., Kansas City, Mo., Milwaukee, Wisc., Minneapolis, Minn., New York, N. Y., Raleigh, N. C., St. Louis, Mo., Tulsa, Okla., Wichita, Kan.

## COMMENT

INDEPENDENT dealers will not be sorry to learn that a resolution introduced in Congress would subject "co-ops" to federal income tax.

It always seems strange "to the little fellow" why, in a country where justice is deemed the supreme virtue, that there is often great discrimination shown in the laws. There are too many tax exemptions in this country—which make the tax payers dig that much deeper.

At the end of 1948, the gas utilities were serving 22,689,800 customers, including about 325,000 customers who receive LP-Gas directly from gas utility companies.

In addition, it is estimated that more than 4,500,000 customers are being served with LP-Gas in rural areas and other territories extending beyond the gas utility mains.

Today nearly 25,000,000 housewives in the United States are "Cooking With Gas."

It's good that LPGA is working on the weights and measures problem. Meeting of weights and measures officials in Washington recently focused attention on it. It's not easy to arrive at a measurement method that suits all. But the LPGA is facing the situation, and with patience by all concerned, solution will be found.

The state insurance department of Texas will survey all butane dealers' facilities, beginning next month, to gather rate-making data, according to Dean Whiffen, director of the insurance department liability section.

Mr. Whiffen stated that the industry is so new there isn't enough experience to equitably set rates and fix liability so they are going to send out engineers to acquire the needed facts.

Mr. Whiffen said he didn't know whether current rates are too high or too low. That's the position of lots of insurance companies but not many of them are taking the positive method of learning the facts that will be followed by Texas.

We in the industry have ample reason to believe that, generally speaking, operations are on a high plane of safety but believing this and proving it to insurance companies is a different thing, especially when careless reporting dramatizes every gasoline fire and accident as originating through careless handling of butane and propane.

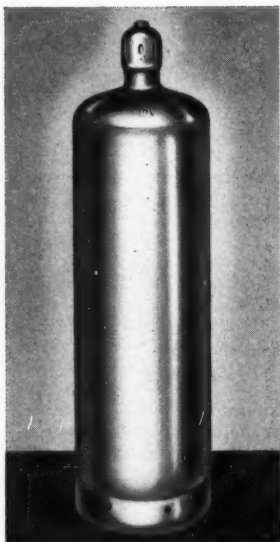
The days of the "old stove round-up" are back.

This was a popular way of clearing out the warehouse of big inventories pre-war. All of the old cooking appliances in a dealer's territory were bargained for and modern ones installed in their places.

This campaign can be waged against the owners of old gas appliances as well as against those who are still burning coal and oil.

According to GAMA, nearly 50% of the 25,770,000 gas ranges in use are more than 10 years old and 25% are more than 15 years old. There's a market.

By Ed.



MANUFACTURED TO I. C. C.  
SPECIFICATION 4BA-240



There's a difference between



**MINIMUM** WEIGHT

and **MINIMUM**  
**PRACTICAL WEIGHT**



... to YOU, that  
difference means

**LONGER LIFE and**  
**GREATER SAFETY**

**HARRISBURG**

**LITE-WEIGHT**  
**PROPANE CYLINDERS**

**100 lb. capacity...Tare Weight 72 lbs.**

... that's why YOU should buy

**T**here's a big difference in Lightweight Propane Cylinders ... a difference you should consider carefully before you buy. To be safe, to give you the service you expect, a lightweight cylinder must contain sufficient steel and possess sufficient wall thickness to take the hard knocks of long-time use.

Harrisburg Lite-Weight Cylinders are fabricated from high tensile strength alloy steel. They are all hydrostatically tested to 480 p.s.i. With a tare weight of 72 lbs., they possess maximum safety with minimum practical weight. They are America's finest LP Gas Cylinders ... made by the pioneer and world's largest producer of high-pressure seamless steel cylinders. So ... when you buy, buy highest quality—not lowest tare weight.

**PROMPT SHIPMENTS** Now available: Lite-Weight Cylinders hot-dip galvanized. Write for prices.

Harrisburg Steel Corp., Harrisburg 4, Pa. 3-49

We want prices and delivery on your Lite-Weight Propane Cylinders in quantities of: ( ) 25-99, ( ) 100-499, ( ) over 500, ( ) with caps, ( ) without caps, ( ) with valves, inserted.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

**Harrisburg**  
**STEEL CORPORATION**  
HARRISBURG 4, PENNSYLVANIA



**YEARS IN**  
**PENNSYLVANIA'S**  
**CAPITAL**

## BEYOND THE MAINS

**W**HERE'S the money going these days?

Some items in the papers help give the answer. Deposits in New York state savings banks have been increasing at a faster rate than last year. In May, for instance, they increased 48 million dollars and the total for the state has crossed the 10 billion dollar mark.

There's the dough, right in the bank, more and more all the time, waiting for any smart, energetic doorbell pushing butane-propane operator.

The late Henry Ford stirred a national controversy when he ignored the traditional work-and-save theory and urged youth to "work and spend." Right or wrong as a policy, at least it's a doctrine that would keep industry's wheels turning.

The end of the Federal government's Regulation W, as indicated in this space last month, has thrown competitive selling by means of installment plans wide open.

This means that everyone who sells has a new selling tool—easy payments. Easy payments have done a lot to build up the American mass production system—through opening huge markets of medium and low income groups for manufactured goods. In turn, the increase in size of the market before the war made possible mass production and reduced prices. It is to be hoped business will employ easy payments with discretion, so neither the seller nor the consumer will get over-extended.

But already there's plenty of evidence of increased use of easy payments as a weapon of competition. And don't forget that it's not the electric fellows, alone, who are competing with the LP-Gas operator. Everybody who's trying to sell anything to the consumer is competing for the consumer's dollar.

In New York, Davega Stores Corp. announces it will continue a 10% down-payment requirement, but will lengthen the maximum payment period to three years on refrigerators, washers and air conditioners. Max Kassover, president of Vim Electric Co., says Vim will require down payments of less than 10% and allow longer payment periods than were permitted under Regulation W.

The president of a large industrial bank in New York City says the bank's switchboard facilities were taxed to capacity following announcement of a plan whereby an automobile can be bought for no fixed down-payment and 36 months to complete the balance.

On Flatbush Avenue, Brooklyn, a big sign announces a Crosley car can be bought for \$7.19 a week.

And you ain't seen nothin' yet!



It is claimed in some quarters that Consumers Research, Inc., of Washington, N. J., is on the electric side of the fence. We paid them a visit the other day to try to find out.

They say no, they're not on either side of the fence. They also say they correct earlier statements sometimes, and don't mind admitting it if they've been wrong.

This year they plan to do a couple of things that may have a good effect. They plan to make their first test in 10 years of the leading gas refrigerator—that is, have the test made for them. The reports CR has been issuing to its subscribers have to do with the gas refrigerator of 1939. How would the electric people like it if their ranges were judged by those of 10 years ago?

Information has come in that salesmen for electric appliances have been exhibiting certain reports of Consumers Research as purporting to show advantages of electric appliances. We have been informed by Consumers Research that this, from their point of view, is improper. Their reports are issued as communications between themselves and their subscribers, and they are not supposed to be used by salesmen. So if anyone catches a salesman showing Consumers Research material around, the thing to do is to write about it to Mr. Frederick J. Schlink, Consumers Research, Inc., Washington, N. J. (Mr. Schlink is the Number One Man there.) Or communicate about any misleading or out-of-context, or improper use of this or other material with BUTANE-PROPANE News, at our New York or Los Angeles offices.

Answering our query about whether they had any tendency to favor electric rather than gas appliances, Mr. Schlink denied this was so.

Since Mr. Schlink has supplied the writer with material and given us permission to make a few minor quotes and references, we'll review briefly some of their statements that the electric people haven't liked.

In 1947, Consumers Research, in a two-column report on electrical hazards, stated that faulty wiring and equipment or misuse of electricity are responsible for between 5% and 10% of the fires in this country. It pointed out that these figures may be low rather than high, because when a building is completely destroyed, the cause is reported as unknown unless someone really knows how the fire started.

In addition to the property hazard, there is a considerable hazard to human life, Consumers Research pointed out, since about 1300 people are killed accidentally by electricity every year, and a good many of these deaths are due to accidental contact with low voltage (110 volts) circuits in the home.

Ed Titus

# Every Home a Prospect

**Good Service Builds a Reputation for LP-Gas  
Dealer And He Uses It To Make More Sales.**

By JAMES JOSEPH

**T**HIS is a survey covering the day-to-day overall operations of Coastside Gas Service Corp., Half Moon Bay, Calif. While possibly not typical, Coastside Gas Service's field is unusually varied, catering to a farm community and at the same time covering a coastal area. It serves a community nestling along a Pacific Coast bay; adjacent are rich agricultural lands; high in the surrounding hills are millionaire mansions and homes of commuters from nearby San Francisco.

This article covers Coastside Gas Service Corp.'s entire operations—from storage tanks to installation, from salesroom merchandising to

field operations. This seaside-farm-land concern not only is staffed by a competent field sales force, but has a simplified, workable accounting and bookkeeping system; maintains an up-to-date salesroom and appliance department; has good, though not extensive, industrial outlets, and is medium-sized and prosperous.

Coastside Gas Service Corp. is a subsidiary — though a separately incorporated concern—of California Gas Service Corp., which owns all Coastside stock and 100% of the stock in two other LP-Gas



Storage plant of Coastside Gas Service Corp. at Half Moon Bay.

sales concerns, one in California, the other in Idaho. In Willits, Calif., it's the Pro-Flame Co. In Nampa, Idaho, the American Propane Co. (See BUTANE-PROPANE News, July, 1949.)

Coastside Gas Service Corp. is one of two Half Moon Bay LP-Gas dealers, and is the town's oldest. Half Moon Bay has a population of only 1500, and has no natural gas. Electricity is the only competitor.

Of its gas sales 90% are domestic; the rest are divided between local industries—and the fishing fleet, Half Moon Bay's biggest source of income.

Coastside has two salesmen on its staff, working on 10% commission and making sizable weekly incomes. It supplies its salesmen with a big, 100 page manual, carrying descriptions of every appliance and service Coastside offers—with full-sized 8x10 photographs of all appliances stocked. Several photos in the manual show the company's

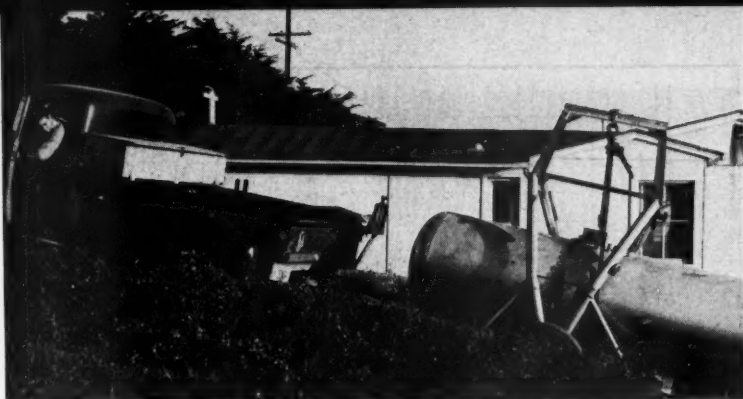
sales room, its 40 by 30 building (company-owned) and its fleet of 4 trucks, 2 tankers, 1 pick-up, and a panel service. Also included are company gas contracts, and legal explanation of service rules and regulations.

Most of Coastside's business comes from the field—and it's sparkling, fluorescent-lighted sales-room is really just a place where customers select at first-hand what they'd previously bought through field salesmen.

Phil D. Webster, Jr., is Coastside's manager. He is young, personable, and has one secretary-accountant. A typical Coastside sales-installation operation begins when Mr. Webster receives a phone call from a prospect. Mr. Webster notes name, address, and place of installation. Then he makes an appointment, either goes himself or sends a salesman. If it's to be a floor furnace, he makes careful measurements, determines temperature rise necessary, notes doors, window

Rolling a storage tank up an incline for mounting.





Pick-up truck pulls customer's supply tank into position for mounting at home of J. G. Civelli.

space, height of ceilings, whether the house is insulated or not. The Half-Moon Bay area never goes below freezing. A 40° variance is usually enough floor furnace regulation.

But Mr. Webster and his salesmen don't wait for phone calls. "Every home is a prospect," he says, and sends his men house-to-house, if necessary.

Once a sale is definite, he writes it up on a 4-copy order blank, each numbered. His serviceman gets the hard copy—on which he'll add fittings and parts as they become necessary at the job. The order blank has a space for the customer's signature to avoid post-billing disputes. It also notes amount paid with the order, balance due on the contract, service and finance charges, number of payments to be made, and date of first payment. If the job is F.H.A. or handled through the local bank, the original goes there. The yellow copy is filed. Bookkeeping is geared to this copy,

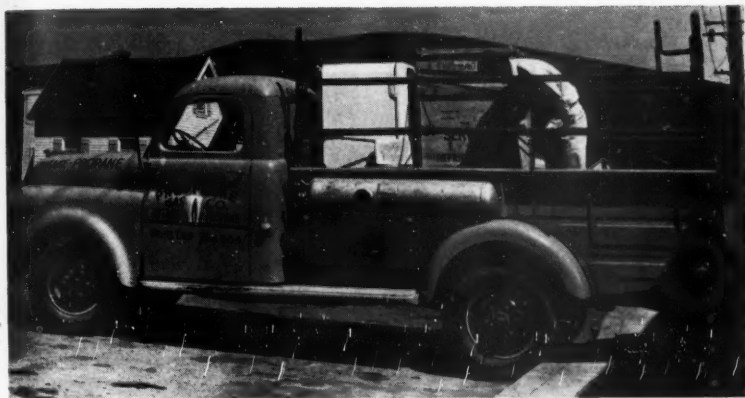
completed from the serviceman's additional entries as parts are found necessary on the job.

Gas sales—delivered from one of two tankers—are registered on a separate form, one original, one copy. The driver makes this form out, tabulating gallons of LP-Gas for tractor fuel, motor fuel, or for non-motor fuel. Every evening drivers list their day's gas deliveries in a ledger—as double check against gas sales. The company's accountant files the original gas sales blank. Each day's sales—installations, gas, and appliances—are forwarded to the parent company, whose offices are in downtown San Francisco. Deliveries are made on a "keep filled" basis.

Drivers keep file index cards in their trucks, thumb through customer cards each morning before starting their routes. Drivers control deliveries, decide when tanks need refilling—it's their responsibility.

Coastside's pick - up delivery

One of the master forms used by Coastside Gas Service.



Appliance delivery truck showing convenient 1½ in. guard railing to hold in appliances.

truck is geared to efficiency. It carries two 50-gallon tanks secured outside the truck bed, one on either side of the vehicle. That leaves the entire truck interior for appliance deliveries. A strong, 1½" diameter tubular steel guard rail extends the truck's service height, helps keep appliances in place.

To keep its name before the public, Coastside lists itself under several classifications in the San Mateo county phone book and subscribes to a quarter-page display ad in the classified section. The ad is attractive and uses a cut showing fueling with LP-Gas from a Coastside truck. It's a real eye-catcher. Coastside tried radio commercials, got no results, and gave up that media. Weekly the company runs a 2-column, 10-inch ad in the local Half Moon Bay "Review"—usually an illustrated layout.

But its best talking point—the

thing which most often gets its salesmen's feet into customer's doors is the illustrated manual—with photographs—furnished each field man.

Out at its fence-enclosed bulk plant—beyond the residential district and four blocks from the downtown store location, is storage for 17,000 gallons of LP-Gas in three holders, one with 10,000 gallons propane capacity, two smaller—4000 and 3000 gallons—carrying butane. The company's two tankers—one with a 900-gallon tank, the other carrying dual spheres, holding 500 gallons each—service from the bulk plant. On hand are 150-, 250-, and 500-gallon tanks ready for home or industrial installation. The company sells no tank smaller than 150 gallons, is now redeeming smaller capacity vessels held by its customers.

To handle tanks, it employs a



Phil Webster, Coastside manager, leading up to signature on the dotted line. The customer is Mrs. Albert Dunn, wife of the editor of the Half Moon Bay "Review."

specially-built, tubular steel trailer and cradle, which can lift 500-gallon holders, simplifying the transporting job. The trailer is 2-wheeled, holds the tank while the truck hauls appliances like Servel refrigerators or stoves. A Coffing hoist, 2-ton capacity, lifts tanks upon cradle.

The bulk plant uses gravity flow pumps, located directly beneath the storage tanks to take advantage of gravity—the best and most efficient pump location in a bulk plant. A metering station for both propane and butane is a concrete block-house, without doors, so that air circulates freely.

Coastside's manager uses a unique argument in selling customers on larger tanks, persuad-

ing them to exchange small holders for large. Since it leases most tanks, sells few of them outright, Coastside draws up a 5-year contract (longest legal under California law). The 150 gallon tanks rent for \$20 a year. A \$15 installation charge (half for installing, half for removing) is payable in advance. The 5-year contract is automatically renewable after that period at nominal charge of \$1 per year. The 250-gallon tanks rent for \$25 a year for the first 5 years, \$1 yearly thereafter, with the fixed \$15 delivery charge added. The 500-gallon tanks rent for \$250 for the first 5 years.

#### Better Prices on Larger Dumps

The clincher is based upon the investment value of larger tanks. Let's say the customer has a 50-gallon tank now. Coastside, from the point-of-view of gas delivery economy and efficiency wants to put in a 250-gallon holder. Gas delivered to a 50-gallon tank costs 21.5 cents a gallon. But gas delivered to a 250-gallon tank costs only 16.5 cents per gallon. Mr. Webster points out to the customer that for a \$140 total rental and installed fee (over a 5-year period) for the 250-gallon tank, the customer will save 5 cents per gallon on gas. Should he use an average of 100 gallons monthly, that's a 5-dollar monthly savings—or \$60 a year. Where else, argues Mr. Webster, can you invest \$140 and have it draw interest at a rate of \$60 yearly. That's almost 60% earnings—



an argument which usually convinces.

Let's follow the company's sales-service operations still further. Joe Civelli, a one-time San Francisco store executive, who lives up the beach four miles, traded his old 250-gallon tank for a 500-gallon. The trailer-cradle transport combine was sent to the bulk plant, towed by the pick-up truck. In less than an hour after Mr. Civelli's order, the tank arrived at his beachside home; half an hour later Coastsides 4-man crew, including Mr. Webster, had set it in place, removed the old tank, and had gas hooked up again.

Mr. Civelli invited us all in. And then he gave a testimonial that would make any company feel proud.

"Yours is the best service I've ever seen . . . never saw men work better nor faster. I ordered this tank an hour and a half ago. Now it's already installed and supper's on the stove—using the new tank. Service like that just doesn't happen around here often."

And Mr. Civelli is right—service brings Coastsides plenty of customers—just from county gossip. But gossip about how good your service is never hurt any LP-Gas concern.

Coastsides installations include galley stoves on fishing boats. The company is awaiting expectantly the completion of a \$5,000,000,  $\frac{3}{4}$ -mile breakwater which will provide anchorage for 600 fishing vessels. The new harbor is being built

in an effort to move the fishing fleet from its present anchorages around San Francisco Bay's Golden Gate—now fairly clogged with fishing traffic and fast proving a headache to the navy—which seeks cleared passage through the Golden Gate.

Coastsides sales training program starts with Mr. Webster's personal instruction. He teaches operations and features of each appliance on his sales floor—appliance by appliance until the selling points of each are thoroughly learned. Then he takes the new salesman out into the field, makes house-to-house canvasses with him for about a week. Salesmen are advised to read back copies of industry trade journals; avail themselves of other sources of information.

Installation men (Coastsides now employs two) start as helpers; minimum job requirement is pipe-fitting experience and mechanical ability.



Mrs. Joanne Morgan, bookkeeper of Coastsides Gas Service.

36150

DATE \_\_\_\_\_ 194\_\_\_\_\_

ACCOUNT OF \_\_\_\_\_

**ADDRESS**

	PROPANE			
	GALLONS OF BUTANE FOR TRACTOR FUEL			
	PROPANE			
	GALLONS OF BUTANE FOR MOTOR FUEL			
	POUNDS			
	GALLONS OF PROPANE BUTANE FOR NON-MOTOR FUEL			
		STATE SALES TAX		
		TOTAL		

The undersigned understands that the fraudulent use of this affidavit to secure exemption will subject the undersigned and all guilty parties to a fine of not more than \$10,000, or imprisonment for not more than five years or both, together with costs of prosecution.

The undersigned purchaser certifies that he is a \_\_\_\_\_ and that the \_\_\_\_\_ pounds of BUTANE  
(STATE BUSINESS)  
In the order covered by this delivery ticket will not be used as fuel for propulsion of motor vehicles, motor boats, or airplanes, and will not be used in the manufacture  
or production of such fuel, but will be used for the following purposes: \_\_\_\_\_

NAME OF PURCHASER

---

NAME \_\_\_\_\_ Address \_\_\_\_\_

### A special bulk plant gallonage

reconciliation form is kept day-to-day, turned in for final tabulation at month's end. It lists gallons on hand at start of the month, fuel received, fuel withdrawn, the closing inventory in theoretical gallons, closing inventory in gauged gallons, and gain or loss. This acts as a perpetual gas inventory.

#### Send Originals to Head Office

A Cash Record-Work Sheet is a daily compilation, mailed to the San Francisco central office, which lists all money received for the day, disbursements, including petty cash voucher receipts. The original copy goes to San Francisco, the other stays in Half Moon Bay.

Most useful of its forms is a perpetual inventory sheet—kept day-to-day, divided into two sections: sales record and control figures.

The sales record is broken down into gas and appliances, lists all revenues, costs and number of gallons sold, and to whom. All charges for hauling, labor, service, etc., are noted.

The control figures list the employee's number, cash sales, charges, keeps total cash received separated from total sales.

Coastside's customer area is relatively rugged, and little affected by metropolitan fluxes. Coastside's business is good, getting better. No complaints along that line from its management. High in the hills, along San Francisco's famed Skyline boulevard, are swank homes—Coastside customers. Farther down the peninsula in some of the coast's

most rugged, hilly areas, live ranch owners and homesteaders, most of them LP-Gas users. Up the coast at Princeton-by the Sea, sturdy Portuguese and Italian descent fisherman push seaward—equipped with LP-Gas galley stoves. Intermediate, between rough hills and the level coast is fertile farmland, small truck gardens, where everything from cabbage to artichokes grow.

Meanwhile new and old customers phone into Coastside's neat showrooms, setting into motion its customer service-salesman team—the typical operating schedule which this article surveys. Perhaps typical of progressive, business-wise, sales-installation setups nationwide.

#### Tin Plate for Gas Meters Restored to Prewar Standard

The tin and antimony section, U. S. Department of Commerce, which administers tin order M-43, amended this order effective June 2, bringing the weight of tin plate for gas meters up to prewar standard.

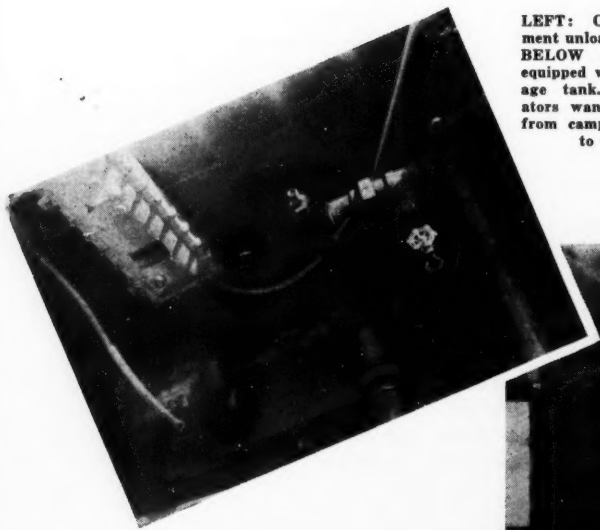
Restrictions on pig tin during the war made it necessary for meter manufacturers to accept tin plate of 3.30 pounds per base box. The new order lifts the weight of tin plate to six pounds per base box. In addition, tin for use in solder has been raised from 50 to 60%.

The committee's study emphasized the fact that use of this tin plate shortens the life of tin gas meters by approximately 10 years and much of the tin in gas meters is recovered after use.

# Remote Oregon Finds LP-Group



The 18,000 gal. storage tank of Columbia Gas Equipment Co., with background of mountain of perlite which will be processed with propane gas.



LEFT: Corken pumping equipment unloads car at rate of 80 gpm. BELOW (left to right): Camp equipped with gas piped from storage tank. Safety-conscious operators wanted tank located 500 ft. from camp. Only means of access to camp is by boat.

# eginning Camp Supplies Its Needs

COLUMBIA Gas Equipment Co., Portland, Ore., recently installed an 18,000-gallon storage tank in what is believed to be the most remote location in the country. Access to the location is gained by driving 15 miles up an abandoned railroad grade along the Deschutes river in Eastern Oregon. Then one must cross the turbulent river by boat to the Dantore division of Dantore Russell Corp.

The mountains in this area have large deposits of perlite, an ore which is milled and then exploded by dropping it through a propane flame. This is marketed as a light-weight plaster aggregate.



J. C. DUNCAN

One 18,000-gallon tank, manufactured by the American Pipe & Construction Co., of Portland, has been installed and another is to be placed soon.

Long pipe lines were necessary as the operators wanted the tank far from the camp in which the crew lives. The distance from the car unloading tower to the tank is about 500 feet. Corken pumping equipment unloads the cars at 80 gpm.

Two Mitchell Model 140 vaporizers are used to insure a supply of vapor for the furnaces.

Gas is used wherever possible in the camp. A line runs to all bunk houses, office, laboratory and cookhouse for heat, water heating and cooking. A Corken Model 10 pump is used to fill cylinders and the trucks which haul the ore.

The entire plant was designed and constructed under the supervision of Jim Duncan of the Columbia Gas Equipment Co. of Portland, Ore.

quip-  
gpm.  
Camp  
stor-  
oper-  
0 ft.  
cess



# Gas-Minded Canadians

## Welcome Propane Dealer's Services

**P**ROPOSED construction of a \$48,000,000 natural gas pipeline to run from the Leduc oil field in



A. W. HUGH

northern Alberta across the prairie provinces, has been responsible for a quickening of interest throughout western Canada in the use of gas. Sharing in, and contributing to this increasing gas-consciousness in Saskatchewan is Hugh Gas, Limited, a rapidly expanding distributor of liquefied petroleum gas and gas-using appliances. The young firm operates through a network of 180 dealers in Saskatchewan.

As far back as 1942, before the pipeline project was discussed, Albert W. Hugh, owner of a tire business in Minot, N. D., foresaw the advantages of the use of gas in Saskatchewan, where the price of coal was spiraling, and electricity—also expensive in both urban and rural areas—had not yet reached all farming communities.

But it was not until the end of the war that Hugh Gas, Limited,

By C. E. BELL

was formed, with head office in Regina. That the venture is soundly established can be gauged from the fact that the company's turnover for the last six months of 1948 grossed \$180,000.

Born in Ohio, and a graduate of Northern university in that state, A. W. Hugh came to Minot in the early 1920's. There he established a tire dealership. The sports-minded Minot businessman, in the pre-war years, holidayed in Saskatchewan to relax with rod and line. But on these trips to favorite fishing haunts, the observant Hugh didn't let his keen business sense relax. He found that Regina was the trading center for over half the province of Saskatchewan; he found that a million residents could be reached, with this point the hub of a distribution center; he found there wasn't a gas utility in the entire territory, and that coal—selling for about \$11 a ton at that time—would be the principal competitor of bottled gas for cooking purposes.

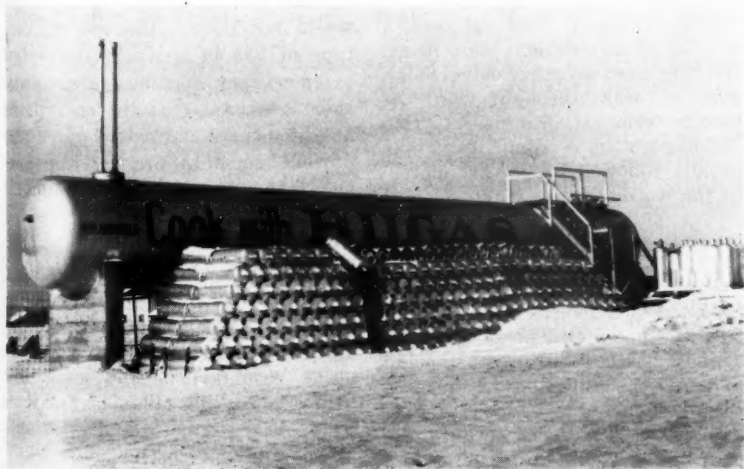
Spurred by the rapid spread of the bottled gas industry in the United States, Mr. Hugh decided to forego his established tire

business in the border town, and come north to Saskatchewan to pioneer this new line. Before he moved, a thorough survey was made of the new territory he planned to take over. "The potential dealers and users we contacted were interested, and eastern Canadian manufacturers indicated they would allot us appliances for Saskatchewan, so we placed our orders and waited for the cessation of hostilities," recalls Mr. Hugh.

In the spring of 1946, Hugh Gas, Limited, was formed in Regina. A. W. Hugh was the principal stockholder and president of the limited company. His 25-year-old son, Tom, and son-in-law, George Hefter, came in as junior partners. Even before a bottling plant was

built on a two-acre site on Winnipeg St., the company was selling ranges, and sending the steel gas cylinders to a bottling plant in Minot for refilling. "We expected to have to do a lot of missionary work in introducing liquefied petroleum gas to Saskatchewan, but before we had a place of business we were selling ranges from our hotel rooms," as the tall, personable Hugh put it.

The Regina bottling plant, completed in the fall of 1946, had to be built out of used materials because new building materials were being used for the construction of houses. When the temporary plant was ready, first tank carloads of gas from Oklahoma and Texas began to arrive, to be stored in the 18-



Bulk plant and cylinder reserve of Hugh Gas, Ltd.



000-gallon bulk storage tank, on the site of which, foot-high black letters exhorted all to "cook with Hugas."

In the following month the slogan was heard much in southern Saskatchewan as the new firm launched a radio and newspaper advertising campaign to list the advantages enjoyed by communities served by gas. The campaign publicized the safety features of the ranges. It told how an odor was added to the gas to act as a warning if the gas escaped.

It was pointed out there was no odor from the burning gas. At a time when most urban areas were having trouble with overloaded power lines, the advertising copy brought home the fact there would be no power failures with gas. And a cylinder of gas usually lasted from two to three months.

The campaign paid off and a number of installations were made. But the most effective advertising medium was through word of mouth from satisfied users. "One installation in a community was usually followed by several more," in the words of Mr. Hugh.

#### Banned ICC Cylinders at First

But all was not clear sailing for the pioneer business. For a short time the use of the steel, gas-filled cylinders, which were constructed to American Interstate Commerce specifications, was banned in Saskatchewan. This was because the province was operating under the American Society of Mechanical Engineers' code governing pressure



Art Davis (left), installation and repair man. George Heffer, part owner.

vessels. The Dominion government would not permit the use of this type of gas in barracks converted to emergency housing. Commodity shortages hampered the enterprise at every turn, and even before the present embargo on the importation of gas ranges into Canada, demand for appliances far exceeded supply.

Gradually the business mushroomed under Mr. Hugh's able direction. Obstacles were overcome as they arose. New lines of appliances were added, and soon the firm was selling all sizes of gas water heaters and ranges for domestic and commercial use.

In the summer of 1948 a one-story, aluminum-sided building, 64

by 32 feet, was finished to house a modern, automatic L. C. Roney bottling unit, capable of filling four cylinders at once. The temporary building was torn down. Dockage space was provided for pumping the tank cars brought in on spur trackage running into the plant. New liquid pumps and hoses for bringing propane gas into the storage tank were purchased. Another modern, frame, one-story building was erected to serve as head office for the province-wide dealership organization, and display room for the expanding retail business in Regina. Two  $\frac{3}{4}$ -ton trucks were bought, and now carry the name of Hugh Gas Limited around Regina streets, as they call for and deliver the gas cylinders and appliances.

#### **Branch Has 30,000-Gal. Storage**

Another forward step was made by the company in December, 1948. Hugh Gas Limited opened a new branch in Saskatoon with an up-to-date bottling plant and a 30,000-gallon storage tank. Foundations were laid for a dealer organization in northern Saskatchewan, as well as for a brisk retail trade in Saskatoon. From the original three partners, the staff of the organization has increased to 11. Courteous, well trained mechanics install and service the appliances. Two salesmen, one in the south, the other in northern Saskatchewan, travel country roads to add more dealers to the firm and push the sale of appliances which are supplied to merchants by Hugh Gas on

a wholesale basis. A clerical staff in Regina keeps records for the firm's 180 active dealers in the province. The records show that each dealer has from two to 75 customers, adding up to a total of 2400 gas users in Saskatchewan. The records also show a steady upward swing in the number of cylinders shipped monthly. In January, 1948, 450 of the 100 pound cylinders were shipped, while in November of 1948, 1230 were sent out.

#### **Commercial Installations Increase**

Commercial use of gas seems to be on the increase, according to the president of the company. In the larger centers, restaurants, department stores, colleges, and other institutions are taking advantage of the moderately priced, clean, ashless, cooking fuel. The sale and servicing of Servel gas refrigerators will soon be pushed by the company.

Prospects of his soundly-established organization are summed up by Mr. Hugh in these words: "With the field we have, we anticipate doing a very nice business as soon as the demand can be supplied. Liquefied petroleum gas is already quite popular in Saskatchewan for cooking, and is getting started in commercial use. Present embargoes on the importation of ranges will slow up expansion of the industry in Canada for the present, but it is only a matter of time until the gas is as popular in western Canada as it is in the States."



HAROLD W. WICKSTROM

## Harold Wickstrom, Prominent LP-Gas Engineer, Dies Suddenly

Harold W. Wickstrom, technical editor of *BUTANE-PROPANE News* since the date of its first publication in 1939, passed away in Los Angeles July 7 after a short illness. His age was 51 and he was born in San Francisco.

Mr. Wickstrom was a consulting engineer of international reputation, who had specialized in the liquefied petroleum gas industry for many years. He was a technical writer of great ability and contributed many important articles to *BUTANE-PROPANE News*. The last, upon the subject of "Liquid Transfer With Compressors," appeared in the April, 1949, issue. His was the guiding hand for the 1948 and 1949 June safety issues of this magazine.

Since its first issue in 1932, Mr. Wickstrom was associate editor of the *Handbook Butane-Propane Gases*, the leading text book of the industry, in its six printings, including the third and latest edition published in 1947.

After studying mechanical engineering at the University of California, he entered the field of engineering, and constructed petroleum refineries, LP-Gas town and bulk plants, oil storage plants, pipelines, etc. He had been connected with the Associated Oil Co., Parkhill-Wade, Southwestern Engineering Co. and Swinerton & Walberg Engineers, Ltd. He was a member of the California Natural Gasoline Assn., the American Society of Mechanical Engineers, the Commonwealth Club of San Francisco and a life member of the California Alumnae Assn.

Among the projects constructed under his supervision were the LP-Gas town plant of Las Vegas, Nev., of which he was consulting engineer at the time of his death; the LP-Gas standby plant of Long Beach, Calif.; a portion of the "Little Big Inch"; and the Naval underground fuel depot at San Pedro, Calif., during World War II. He built the first submarine oil loading lines for tankers to load offshore, the original one at Monterey, Calif., and later a second one at Ventura. He designed the town plant for Tijuana, Mexico, the installation of which is not yet complete. In the past he devoted much of his time to the conversion of municipal bus lines, trucks and tractors from gasoline power to butane and was a top authority upon that subject. Twice he was called to Europe for consultation with the Swedish government concerning plans for refineries and pipelines in that country.

Mr. Wickstrom was a great exponent of safety for the liquefied petroleum gas industry, writing extensively upon the subject and serving on the Safety and Technical and Standards committees of the Liquefied Petroleum Gas Assn. He was currently a member of that organization's board of directors, representing the state of Nevada.

## A Little Free Advice Brings in a Lot of Business

**S**OUTHERN APPLIANCES, INC., located in the Shoreland Arcade, Miami, Fla., will soon celebrate its third birthday. It is a robust infant, that has rapidly developed giant proportions.

Featuring St. Charles kitchens in its department of gas appliances, the management claims to have built up a business ranging from \$3000 to \$4000 per week in that line, alone.

"Modernize your kitchen now.

Our experts will tell you how,"

suggests one phase of sales philosophy at the Southern where the element of free advice is stressed. A telephone call from a housewife will take a skilled designer out to the home. He will look over the contemplated space, and state just what cabinet would fit into that corner niche or on the wall above the sink.

Naturally, the Southern prefers to lure the housewife into the store; but once the contact has been established, the sale is at least half made, it is believed.

"Whether you do it by radio, newspaper advertising, house-to-house soliciting, or through the mail, if you can get the home maker to consult you about modernizing plans, a sale will almost invariably result, if properly handled," company representatives state.

And right there is an important

principle, rigidly emphasized at the Southern—namely, that every employee must be well qualified for his work.

"One mediocre representative either in the field or the store can lower the standard of an industry," explained an executive. "We are as particular about our personnel as we are about our place of business."

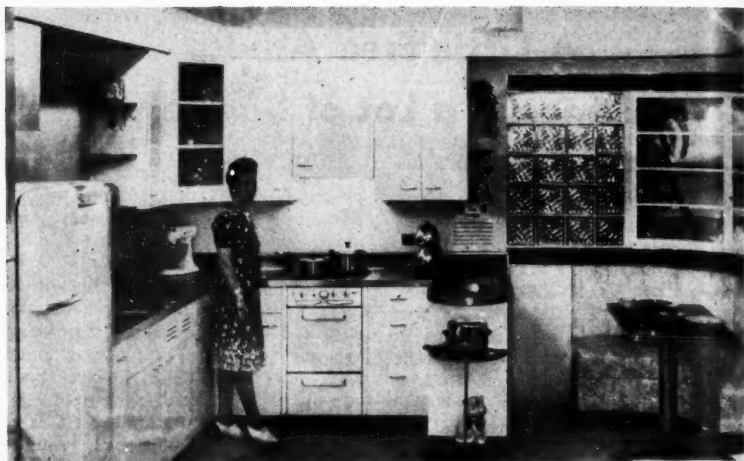
The latter is outstanding. It is a three-story, air-conditioned, sound-proof structure, with every modern convenience. Gleaming plate glass partitions enable managers and super-



Homer Q. Kimbrell, president of Southern Appliances, Inc., Miami, Fla., in the company appliance sales room.

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By MINNETTE LAKE WARREN



LP-Gas appliances make this a modernized "dream kitchen." It is part of the sales room of Southern Appliances, Inc., Miami.

visors to observe sales room activities from their balcony desks. The display room, with its floor of super-concrete, contains a wide assortment of nationally advertised supplies. It is equipped with gas provisions for complete appliance demonstrations. The gas range or water heater may be tested practically. Hot and cold water are at the customer's disposal in the shining stainless steel sinks, and the drains are in order.

A popular feature of the Southern is an insulated booth for exhibition and try-out of phonograph records.

"Records are good trade builders," remarked a sales' executive. "They appeal to youth, and the seniors follow, as a matter of course."

Southern Appliances, Inc., is locally owned. The corporation president is Homer Q. Kimbrell, who also acts

as treasurer. E. G. Garreau is vice president and general sales manager; and H. C. Morgan is secretary.

A new, two-story warehouse has recently been completed at the Dade Dry Dock to house nearly \$100,000 of stock. It has approximately 7500 square feet of space on each floor. Here are to be found the Southern's repair shops, regarded by Mr. Garreau as a big factor in their business build-up.

"We have an expert on washing machines; and two for servicing refrigerators," he said. "We guarantee our work—all of it—since we know how thoroughly every member of our force has been trained. We will not countenance inferiority along any line, and our reputation has been established on expert achievement, whether the job is small or large."

Mr. Garreau states that much business has been obtained through an experienced contact man who works exclusively among contractors and builders. Eight crew men are employed for the field work, which is limited chiefly to the Greater Miami area.

"We have about all we can handle right here," he explained, "without spreading out over more territory."

Mr. Garreau regards the "Home Show" sponsored annually by the Miami Realtors Assn. as an excellent advertising medium.

"While many of the visitors to the March show this year were from out of town, we had a long list of names," he said. "About 75% of them represented prospective home builders—always good material for us! At least 15% became definite customers, and many others may result in sales, later."

## New Plant for Recovery Of Butane and Propane

The Sid Richardson Gasoline Co., Fort Worth, Texas, completed recently a new natural gasoline plant in west Texas, which will eliminate the flaring of field gas. The plant is designed to recover 75% propane and 85% butane.

Provisions have been made to sell propane, propane-butane mixtures and grade gasoline by truck or tank car.

To achieve the relatively high yield of butane-propane fractions, lean oil is removed at two levels in the two main absorbers, passed through propane chillers and returned to the absorbers. Propane refrigeration also is utilized to reflux the deethanizer, and for final condensation on the still overhead vapors to give maximum retention of propane and butane absorbed by the absorber.

## Pat Murphy, Ransome Manager Killed in Train Accident

Paul F. ("Pat") Murphy, manager of the Sacramento Valley district operations of the Ransome Co., Emeryville, Calif., was killed July 13 when his automobile was hit by a Southern Pacific train bound for San Francisco from Sacramento.

Highway patrol officers said the train was traveling at 75 miles per hour when it crashed into Mr. Murphy's automobile.



PAT MURPHY

Pat Murphy was one of the best known LP-Gas industry men in California. For the past 13 years, he has been associated with the Ransome Co. and had specialized in automotive conversions and installations and in the installation of dehydrators using liquefied petroleum gas.

## Illinois Dealer Changes Name and Service

Formerly operating as Condee Radio Electric and serving metered customers and featuring sales and servicing of refrigeration and air conditioning equipment, the company will be known in the future as Condee Gas Service, Inc. The Mt. Sterling, Ill., firm will be incorporated soon by Verlin E. Condee.

Plans are in order for an 18,000-gal. bulk storage plant, a bottling plant and a bulk truck. Condee Gas Service will sell wholesale to dealers, bottle for dealers and wholesale domestic appliances and heating equipment.

## Making an LP-Gas Cylinder

**F**OR many years LP-Gas dealers all over the world have been handling cylinders but probably few know how these bottles are made. A description of the various manufacturing operations may be of general interest.

The steel used in the production of our new light-weight propane cylinders is a high tensile Man-Ten variation alloy which is cut in circles and cleaned by pickling as illustrated in Fig. 1, showing these blanks coming out of the pickle tanks at Norris Stamping and Manufacturing Co., Los Angeles.

The blanks are then cupped and drawn in steps down the press line as illustrated in Fig. 2. During these operations, the cylinders are annealed and pickled again to provide a smooth workable surface. Fig. 3 illustrates the annealing ovens. The lighter weight (64 lb. as compared to most at 72 lb.) without a corresponding reduction in strength is achieved by the precise, uniform method of drawing the steel so that there is no "wasted," "lumpy" thicknesses in the steel.

This method of manufacturing results in a very smooth sidewall of precision thickness. The halves

**TOP TO BOTTOM:** Fig. 1—Blanks from "pickle tanks." Fig. 2—Big presses form half cylinders. Fig. 3—The annealing ovens.



## By RODGER DUNSTON

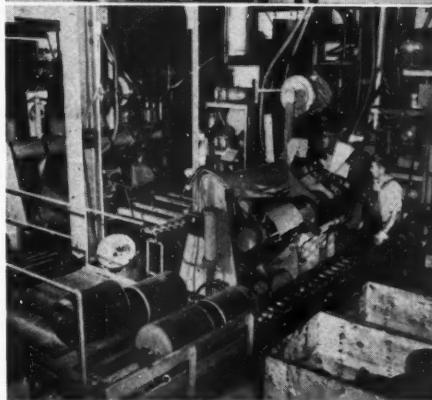
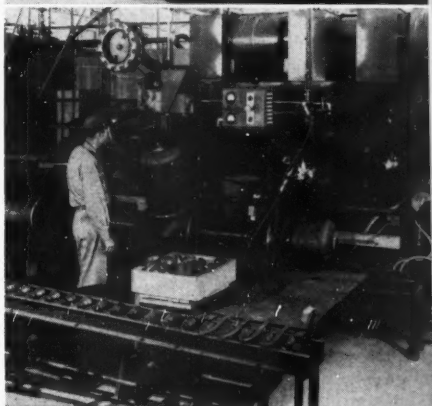
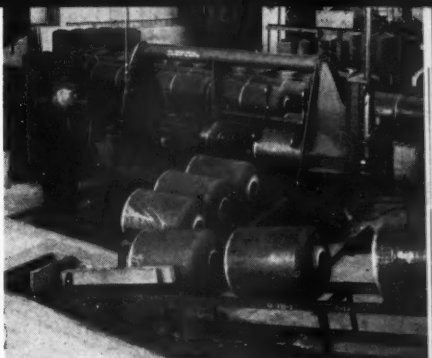
Operations Manager, Compressed Gas  
Cylinders, Inc., Los Angeles, Calif.

are then marked with the identifying symbol, serial numbers, manufacturer's mark, date, and ICC markings on the piece of equipment illustrated in Fig. 4, which provides uniform spacing and depth of imprint.

The marked tops then travel along conveyors to the spud welding machine shown in Fig. 5. These spuds have a pressure flange which, when inserted from the inside, forms a backup for the automatic, submerged arc machine welding, thus providing a vise-like fit for maximum safety. Machine welding also provides a very smooth appearance and eliminates the spatter of particles of weld metal which occurs in hand arc-welding operations.

These tops are then joined by bottom halves and proceed by additional conveyors to one of the automatic seam welding machines shown in Fig. 6. Here the cylinders are gripped rigidly and turned while the center circumferential weld and the rolling ring are submerged-arc-welded at the same time.

The rolling ring is provided with 16  $\frac{3}{4}$ " ventilation openings, 4  $\frac{1}{4}$ " drain holes curled under for a



TOP TO BOTTOM: Fig. 4—Stamping identifying marks on cylinders. Fig. 5—Spud welding machine attaches spud. Fig. 6—Automatic welding machines join cylinder halves.

smooth rolling surface, and curved inward where it joins the cylinder to eliminate any hard-to-clean cracks and reduce the possibility of rusting.

The center weld joins a joggle-lap joint which provides a backup and a wide band of strength around the center of the cylinder. This weld is smooth and flush with the sides of the cylinder, thus eliminating the fulcrumaction which comes from thick protruding center welds. The welding is X-ray-controlled in our laboratory.

The cylinders are then filled with

water and placed in the hydrostatic testing apparatus shown in Fig. 7. This tester is of an exclusive design and highly efficient. The jackets are then also filled with water and the pressure raised inside the cylinder to 480 lbs. per sq. in. The total expansion readings are taken by the inspectors and the pressure released. Readings are then again taken and the permanent expansion must be less than 10% of the total expansion caused by the water pressure in order to comply with ICC 4B or 4BA 240 specifications.

The cylinders then continue to the drying ovens, also shown in Fig. 7, where all moisture is removed. After they are completely dehydrated, the valve is inserted to keep them in this state.

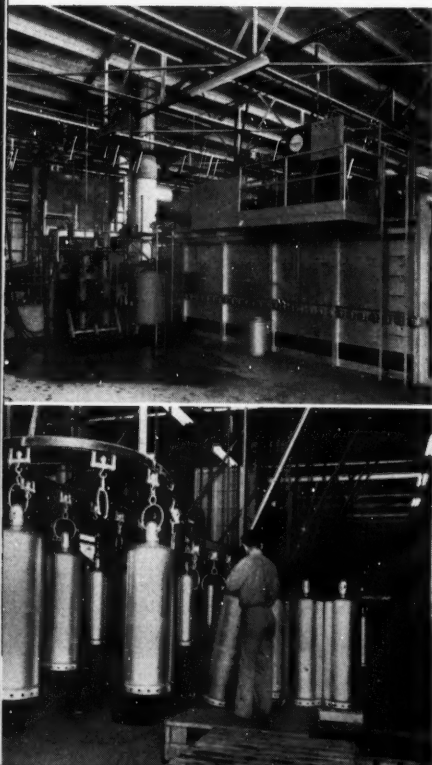
#### Painting is Last Operation

The cylinders are weighed and stamped with their tare weights and tested again with dry air to be certain that there are no weld or valve leaks. They go through the finishing procedure and are painted and dried as shown in Fig. 8, and are then ready for shipment.

Many precautions are taken throughout the entire operation to insure that the cylinder, when it arrives for use at the bottling plant, is dry, safe, pressure-tight, protected from rusting, and has an attractive appearance.

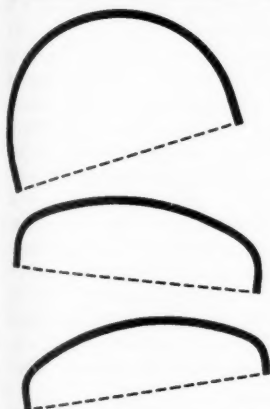
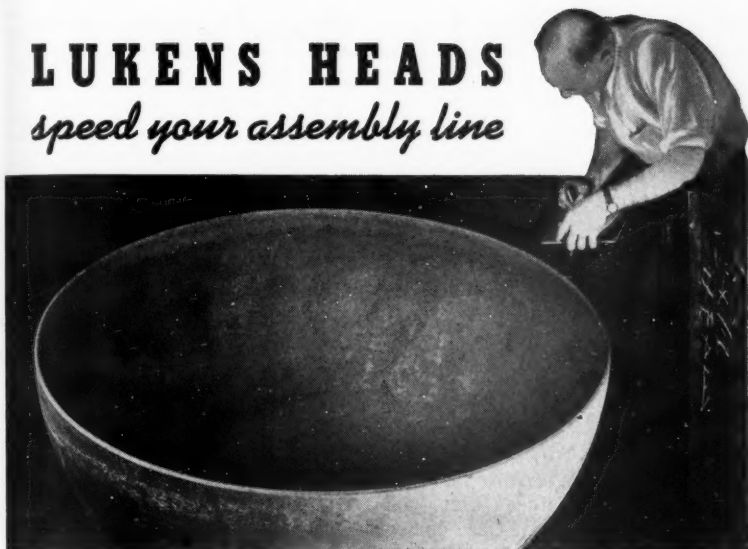
The 100 lb., 60 lb. and 20 lb. capacity cylinders are manufactured in much the same manner.

UPPER: Fig. 7—Hydrostatic testing apparatus. LOWER: Fig. 8—Cylinders on way to drying ovens.



# LUKENS HEADS

*speed your assembly line*



Hemispherical heads, elliptical, standard dished and high crown, deep dished heads—Lukens has hundreds of dies for making these and other types. Lukens Heads are uniform in shape and accurate in dimensions. They help increase production from your assembly line and hold down your costs.

Lukens Catalog No. 1 describes 3,868 Heads. For a copy and for prices, write Lukens Steel Company, 422 Lukens Building, Coatesville, Pennsylvania.

"Head Work", a 16mm motion picture in sound and color, on spinning and pressing of Lukens Heads is available without charge. Running time: 27 minutes. Write for a booking date.



FOUR INCHES TO OVER TWENTY FEET IN DIAMETER

# A Profit-Making Sideline— Anhydrous Ammonia

**I**N writing this article, I am by no means suggesting that the LP-Gas dealer be a general country store or that



HENRI JENNINGS

he should stock every item the traveling salesman tells him will increase his business. However, there are certain allied lines that the LP-Gas dealer can handle easily with the equipment and the manpower he already has, with only a very small additional investment and the training of his present manpower, in these allied lines. One of these is anhydrous ammonia.

There are a few LP-Gas dealers that have taken on the supplying of anhydrous ammonia and equipment to their farm trade, but most of the dealers have sat still and watched the show pass in review. Anhydrous ammonia is the cheapest source of nitrogen available today.

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By HENRI H. JENNINGS  
Macon, Georgia

The 1947 retail cost of nitrogen was approximately as follows:

Source	Cost of 1 Pound of Nitrogen
Nitrate of Soda .....	16 cents
Cyanamid .....	13 cents
Ammonium Nitrate ....	10 cents
Anyhdrous Ammonia ...	6 cents

The handling and behaviour of anhydrous ammonia is very similar to that of propane. Anhydrous ammonia exists as a liquid below 28° F and boils at this temperature. It contains 82% nitrogen, weighs 5 pounds, and contains 4.1 pound of nitrogen per gallon. At 100°F anhydrous ammonia has a pressure of 197 psi, and is stored in 200 psi propane tanks with steel fittings. Ammonia has a stifling odor, and will burn your eyes, cut your skin, and burn the inside of your mouth, throat, head and lungs. However, if handled carefully and with the use of proper equipment, there is little danger in the use of ammonia. While it is possible for ammonia to burn with the proper mixture of air, there is little danger of ammonia catching fire.

The average cost to the farmer this season of 1 pound of nitrogen as ammonia ranges from 6 to 7 cents. Based on this price, the cost of increasing crop yield by nitrogen is approximately:



One hundred and ten gallon dispensing tank on tractor equipped with braces, brackets, etc.

Seed Cotton,  $\frac{1}{2}$  to  $\frac{3}{4}$  cents per pound.

Corn, 14 to 15 cents per bushel.

Oats, 8 to 9 cents per bushel.

It has been stated by a farmer in the Mississippi Delta that by using anhydrous ammonia as a fertilizer on his corn crops, he increased his yield from 32 bushels per acre to 76 bushels per acre.

Since most nitrogen is applied before flame cultivation begins, anhydrous ammonia and propane may be stored in the same tank, with steel fittings (state laws permitting). When anhydrous ammonia has been stored in a propane tank, the tank should be opened to permit all the remaining ammonia to evaporate before again putting propane into the tank.\* It

would also be advisable and desirable to blow the ammonia fumes out, or, to flush them out with a small amount of propane, which should be allowed to evaporate in the tank before releasing.

All fittings and equipment, except the hose, used for storing and use of anhydrous ammonia should be made of iron or steel, as ammonia will corrode brass or copper. The equipment should have a working pressure of 200 to 250 psi.

The first equipment needed by the farmer is a tractor. Anhydrous ammonia is applied to the soil

\* A still better policy is not to use the tanks or cylinders interchangeably.—Editor.

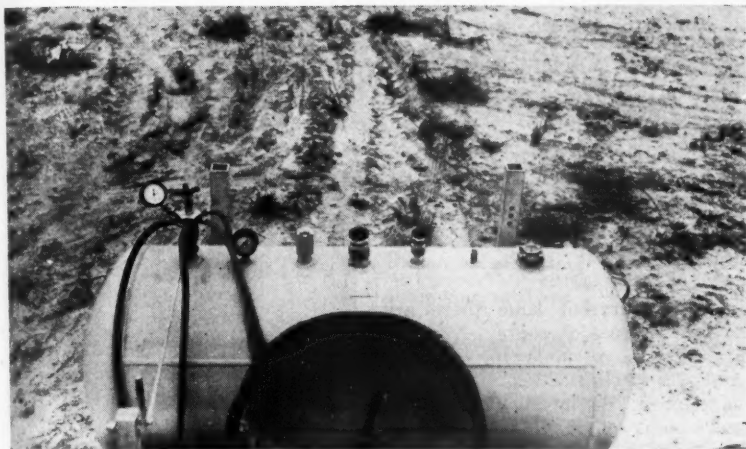
with equipment which necessitates definite speed of the tractor. The farmer will need a 110 gallon, 200 psi dispensing tank, equipped with steel fittings, mounting braces and brackets for installing the tank on the tractor. The dispensing equipment, such as feet hose, etc., are being manufactured and distributed by the Scott Butane Gas Co., Itta Bena, Miss.; the Gotcher Engineering Co., Clarksdale, Miss., and several others. I have visited Solon Scott's and Bill Gotcher's and find their equipment widely used. As to the steel fitting, the Continental LP-Products Co., Dallas, Texas (owned by K. (Doc) Eldon), has pioneered in this field. Doc has perfected a dispensing

compact regulating valve that is practically fool-proof for dispensing the exact amount of anhydrous ammonia per acre that is required for the specific crop. The farmer will also need a 1000-gallon 200 psi tank equipped with steel fittings, mounted on a 4-wheel trailer, which he uses to haul ammonia from the bulk station for use in the 110-gallon dispensing tank installed on the tractor. The bulk stations are 30,000-gallon, 200 psi ccessels or the Hortonspheres which are much larger.

These bulk stations should be owned by the LP-Gas dealer. If he owns the bulk stations he can sell the farm anhydrous ammonia, dispensing tanks, and dispensing



Flame thrower using LP-Gas for burning grass and weeds in crops.

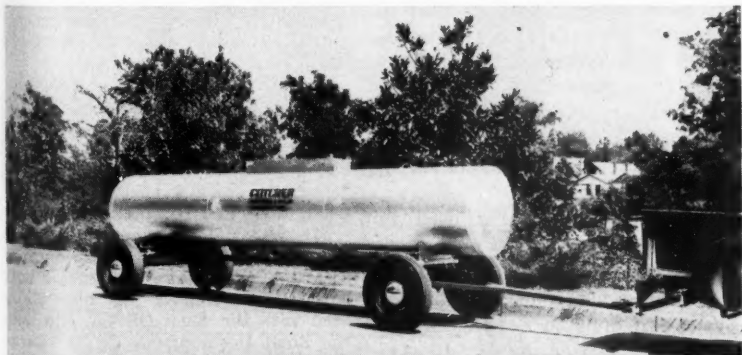


Top view of 110-gal. dispensing tank with fittings.

equipment, a 1000-gallon tank with 4-wheel trailer. Some LP-Gas dealers have found it more profitable practice to rent or lease the 1000-

gallon trailer tanks, thereby guaranteeing extra storage and a sure customer, year after year.

According to the latest statistics,



One thousand gallon tank and 4-wheel trailer for transporting from bulk storage to dispensing tank.



it is estimated that there are between 150,000 and 200,000 acres now under cultivation that have been fertilized with anhydrous ammonia. The majority of this acreage is found in the states of Arkansas, Louisiana, and Mississippi. This is a big business today, and if anhydrous ammonia can be made available, it will prove as profitable to the LP-Gas dealer as his LP-Gas business.

At the present time there are several sources of supply. I understand it is possible to secure a contract, if the LP-Gas dealer will go after it, like he did his propane and butane contracts in 1946. There are rumors so definite that they seem to be approaching reality, that a plant in Yazoo county, Mississippi, will be constructed very shortly. This plant is to be in production within two years after work is started. The cost is estimated to be around \$20,000,000. Several of our large LP-Gas refineries are toying with the idea, and it is entirely possible that in the very near future, your purchases of anhydrous ammonia may come from your LP-Gas supplier; as a matter of fact, Lion of Eldorado, Ark., at the present time, is one of the largest suppliers of anhydrous ammonia.

Data and information used in preparing this article were secured from various sources, particularly from the book "The Response of Crops and Soils to Fertilizers and Manures," written by W. B. Andrews and published by W. B. Andrews, State College, Miss. Anyone

interested in further study and information on this subject of fertilization I refer to this book. It will be found most interesting and instructive.



B. D. GEROY



T. R. McELHINNEY

## Newly Named "Dri-Gas Corp." Replaces Illinois Bottled Gas

Word has been received from B. D. Geroy, president of the Illinois Bottled Gas Co., that the company name has been changed to "The Dri-Gas Corp." The change was made in order to identify the company name more closely with the product marketed and to eliminate the localized character of the old title.

The Dri-Gas Corp., Chicago, is a wholly owned subsidiary of Warren Petroleum Co., Tulsa, producers of "Dri-Gas," and has dealers throughout the states of Illinois, Indiana, Wisconsin, and parts of Michigan, Ohio, Iowa and Kentucky.

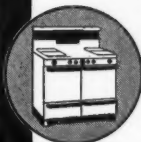
Mr. Geroy has also announced the appointment of T. R. McElhinney as sales manager of the company's bulk service division. He has been affiliated with the Shell Oil Co. and with the Shell Development Co. in charge of liquefied petroleum gases, solvents, by-products, package specialties and agricultural chemicals.

# For Faster Sales and Greater Profits Promote Florence Registered LP-Gas Ranges



**Famous Registered Line Offers Stand-out Values in Wide Selection... to Suit Every Taste... Multiply Sales and Profits**

Now offer your customers the benefits of the Famous Florence Registered Gas Range at lower prices! These new models are engineered to give real value! Ranges, with exclusive Florence features, are available to every income. *Feature the complete Florence line!*



**MODEL 4721** with patented Broilercue: shown at left with optional accessory AC45... center with accessory AC472... at right with plain backguard. Florence Broilercue and big family-size oven give 2-oven convenience.



## MODEL 4321

... with low broiler. This handsome Registered Gas Range gives you a chance to make extra sales. Shown at left with optional accessory AC45 and above with plain backguard.

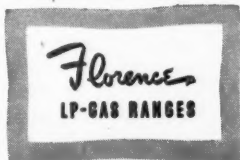
**"TOP OF THE LINE"**



**MODEL 4921**... the original Florence Registered Gas Range with patented Broilercue offers outstanding value. Available with divided or united tops.



• FLORENCE STOVE COMPANY... General Sales Offices and Plant: Gardner, Mass. Western Sales Offices and Plant: Kankakee, Ill. Southern Plant: Lewisburg, Tenn. Other Sales Offices: One Park Ave., N. Y.; 1459 Merchandise Mart, Chicago; 53 Alabama St., S.W., Atlanta; 301 North Market St., Dallas. ©F. S. C.



## GUARDING WINTER CARGOES!



**T**RUCK operators, who battle winter blizzards, have long sought a good method of protecting perishable cargoes from damage by freezing. They have tried many methods without too much success, but the objective has been attained in a new, propane-burning truck and trailer van heater.

Propane gas is a natural fuel for this service. It is clean and non-toxic and when properly utilized has proved to be a dependable

source of heat for cargo protection.

This new equipment is known as the "Cargo Guard" heater and is manufactured exclusively on a national basis by Stampings, Inc., Davenport, Iowa. It was developed originally by Utilities Distributors, Inc., of Maine (See *Butane-Propane News*, July 1948), and this firm will distribute the heater in New England territory. The first official showing was at the May convention of the LPGA in Chicago.

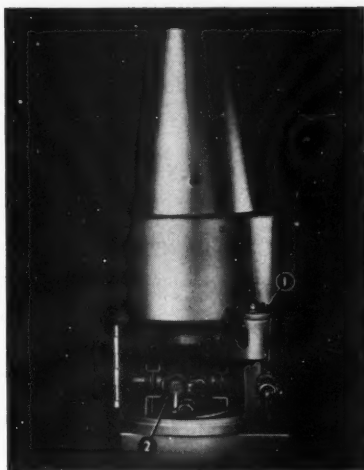
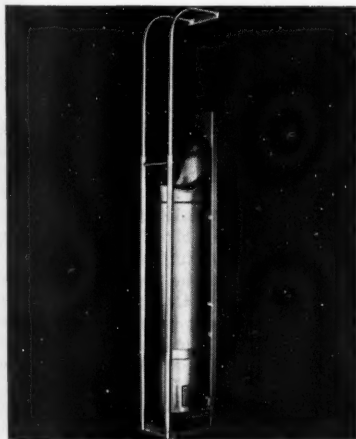
go. This heater opens up a large field for LP-Gas.

The Cargo-Guard heater is safely secured to the wall on the van, near a door. Over it is placed a strong tubular load guide which protects the heater from abuse. This allows the load to be placed so that it will not shift and provides space for recirculation.

Propane gas is supplied from two 20-pound cash-and-carry cylinders, located in a sturdy fuel carrier mounted beneath the bed of the van. An automatic changeover regulator is furnished with a remote indicating gauge mounted so that it can be read through the door of the carrier. Cylinder replacements can be made without tools.

The heater is thermostatically controlled and is protected by a safety pilot valve. It is placed in operation by lighting the pilot and setting the thermostat at the desired temperature range. As heat is required, the ther-

"Cargo-Guard" heater and load guide.

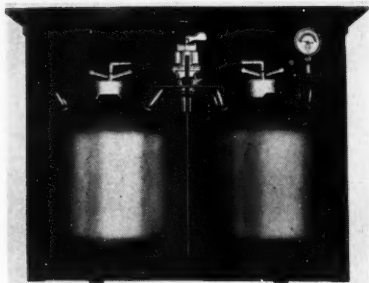


Burner and housing of Cargo Guard heater.

mostat supplies the propane gas necessary to maintain the load temperature. The heater is well adapted for loading perishables in one region and driving into a colder climate, such as going over mountains or from the south into northern blizzards. It can also be used for preheating vans before loading.

The Cargo-Guard heater is rated at 20,000 Btu's per hour. This is approximately one-third more than the heat loss of a 30-foot, insulated trailer. The controls are self actuating. As there are no connections to the tractor, the heater operates independently of the motive power or battery. A trailer may be unhooked and left isolated and the heater will continue to operate. In case of stalls, load protection continues.

The operating efficiency is high. All the heat produced is utilized in the van. A full supply of fuel will protect the load for a minimum of 40



Dual cylinder hookup supplies fuel.

hours if the heater burned continuously. Under actual operation, protection up to five days is possible, depending upon the van condition and the outdoor temperatures.

The heater is 9 inches in diameter and 63 inches high. With the load guide, it occupies less than 1 square foot of floor space. The complete equipment, less fuel, will weigh approximately 200 pounds. Galvanized metal is used throughout the unit for long lasting service.

Recirculated air is drawn off the floor of the truck into the heater just above the burner. The jet convective action within the heater keeps the outer surfaces cool and circulates the heated air around the load.

The Cargo-Guard heater was developed over the last four years in Maine. Its first use was in protecting potato shipments in the frigid area. It has been thoroughly road tested by some four million truck miles of successful service in New England before releasing it for national sale.

The chief products requiring protection from freezing or chilling in transit are fresh fruits and vegetables, canned and bottled goods, groceries, beer, bread, eggs, produce, and some types of chemicals and drugs. Fresh

garden produce is more valuable in winter and must be moved longer distances to market without delay, regardless of the weather. Increasing quantities of fruits and vegetables are moving by truck out of the southern growing fields directly to the cold northern states.

A load of freezable merchandise can vary in value from \$1000 to \$6000. In the smaller fleets, one lost load would pay for proper protection in all of the trucks.

With over seven million trucks and truck trailers of all kinds on the U. S. roads, the market for LP-Gas for cargo protection in closed vans hauling perishables is substantial. This new market for propane gas for van heating opens a new field in which alert operators can extend their gas load.

## "Pyrofax" Will Open New Minnesota Bulk Plant

Construction has just been started on a new "Pyrofax" gas bulk plant and cylinder-filling station at Mountain Lake, Minn. It will occupy about five acres of property on Minnesota State Highway No. 60, one mile east of the center of town. G. D. Rempel of Mountain Lake is the contractor. The plant is expected to be ready for operation sometime this summer. This will make possible improved and expanded service to "Pyrofax" gas users in southwest Minnesota, northwest Iowa, and eastern South Dakota.

The liquefied petroleum gas will be brought to the plant in tank cars via the main line of the Chicago, St. Paul, Minneapolis and Omaha Railroad. At the plant it will be bottled for distribution to homes and farms.

"Pyrofax" gas, a product of Carbide and Carbon Chemicals Corp., New York, is sold through a widespread chain of local distributors.

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The completely assembled storage and filling plant of Inter-Island Gas Service, Manila, P. I.

## Ingenious Shipping Method Saves Foreign Company 40%

By ED JARVIS

Superior Tank & Construction Co.,  
Los Angeles

**A**N unusual method of construction and shipping was used in the transporting of two 5000-gallon storage spheres to Inter-Island Gas Service Co., Inc., Manila, Rockgas distributors for Imperial Gas Co. in the Philippine Islands.

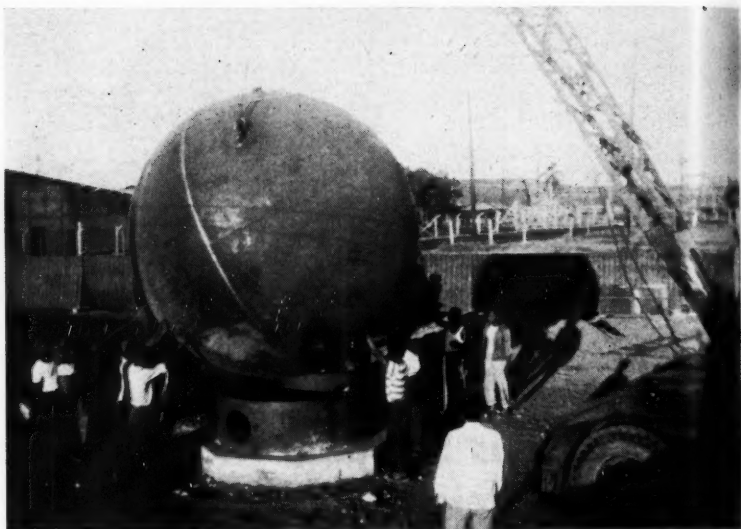
Because steamship rates are based on a cubic displacement basis, it was planned by Philip Koch, vice president of Imperial Gas Co., to ship these storage spheres in halves as hemispheres and nested one within the other to save space. Using this method, shipping charges were reduced approximately 40%.

To make it simpler for the erecting crew in Manila, the tanks were first completely fabricated in the shop of the Superior Tank & Construction Co., in Los Angeles, except for the main circumferential weld.

These tanks consist of 14 pieces of  $\frac{3}{8}$ -inch thick A-212 Grade "B" fire-box steel plate, 12 curved orange peel



This is the way the sphere halves were loaded on a truck for transportation to the ship.



One sphere being set on its base.



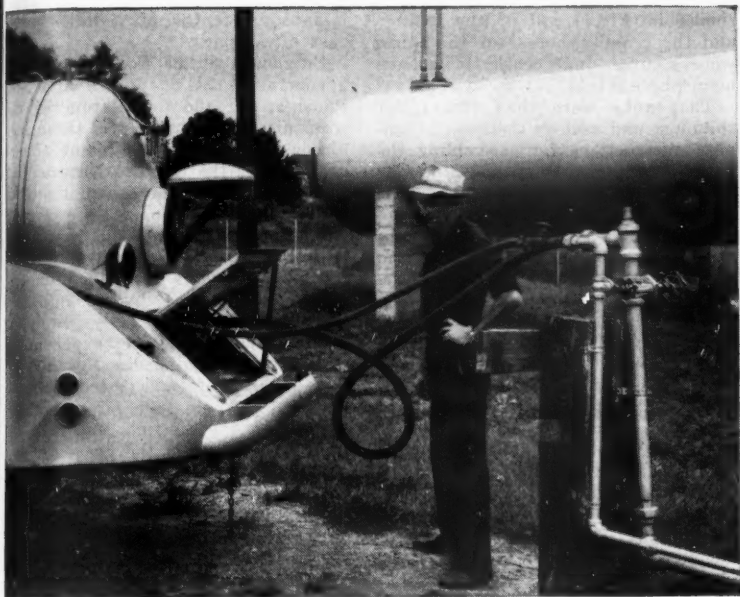
A close-up showing clearly the back strip at the final seam.

side sections and two dished circles for the end to form the sphere. The circumferential weld was the only one required to complete each tank. The hemispheres were matchmarked so that the fit-up operation could be expedited.

The tanks had to be designed so that the halves would nest one within the other. This was no mean problem, for in the normal course of construction the various fittings and recesses are welded into the tanks in position and this would make the nesting of the hemispheres impossible. Therefore, the thermowells, safety valve recesses, 3-inch connections for the fill valves, and the magnetron gauge guard made a jigsaw puzzle of the problem before it was solved.

In order to make the shipping package as compact as possible, and as





## Unexcelled Transfer Service!

For every move you make in handling LP-Gas... you'll find Hewitt Propane-Butane gives you maximum safety, speed and efficiency.

The reason is simple. This hose is built by Hewitt especially for your high-pressure transfer service. *It withstands several times the pressure required with LP-Gas.* And it's designed to give you long service life under widely varying temperature conditions.

Not only that... Hewitt Propane-Butane Hose has a carefully com-

pounded, non-porous, oil-resisting rubber tube. This special tube effectively defies penetration by your highly volatile liquid petroleum gases.

So for unexcelled transfer service—from storage tank to trucks... from bulk storage to tank cars or cylinders... or from trucks to home storage tanks—be sure you get Hewitt Propane-Butane Hose.

For complete details, write today. Address Hewitt Rubber Division, 240 Kensington Avenue, Buffalo 5, N. Y.



### HEWITT Propane-Butane Hose

HEWITT RUBBER DIVISION HEWITT-ROBINS INCORPORATED

AUGUST — 1949

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shown in Fig. I, all of the fittings and the circular bases for the tanks were secured underneath the bottom hemisphere.

The tanks were then crated for shipment and sent on their way. Complete instructions for assembling the spheres were sent to Inter-Island Gas Service, describing exactly how to assemble the halves, how to fit and weld them together. Naturally, qualified welders completed the tanks, and the tanks were then tested according to the latest edition of the API-ASME Code.

From the photographs and reports from the Philippines, the combined plan and operation was a complete success. In fact, two more spheres have been ordered by Inter-Island to be shipped in the identical manner as described above.

The tanks are built to the API-ASME Code to a working pressure of 250 pounds. They are 138 inches in diameter, and on their bases stand 12 feet, 6 inches high. The water capacity is 5800 gallons each, and each sphere weighs approximately 12,000 pounds.

## Butane-Air Plant Gives Way To Natural in Nogales, Ariz.

Citizens Utilities Co., with administrative offices in Greenwich, Conn., have operated a butane gas-air 900 Btu gas plant for the past 12 years at Nogales, Ariz. Gas service is provided to approximately 843 consumers: 86 commercial and 757 residential.

In the fall of 1948 negotiations were completed with the El Paso Natural Gas Co. whereby they would extend a main from the branch line serving Fort Huachuca, Ariz., to Nogales. The 48 miles of gas transmission main paralleling the Mexican border, passing through Patagonia, Ariz., will ter-

minate five-tenths of a mile north-east of Nogales.

Citizens Utilities Co. has awarded a contract to J. H. Welsh and Son, Phoenix, for the installation of the transmission gas main and three regulator stations from the point of termination by the El Paso Natural Gas Co. to the natural gas holder site at 460 Grand Ave., Nogales.

In order to complete the project with a minimum of inconvenience to the gas consumers 10 trained, experienced men will be divided into two working crews. A fully equipped truck including all necessary change-over parts will be provided each crew. A third crew of experienced men has installed the necessary valves for sectionalizing the districts and will direct the purging of the gas each day in the section to be converted.

## New Cracking Process May Solve Peak Load Demands

A new process which is likely to prove extremely valuable both to gas companies and to the petrochemical industry, has been developed in the laboratories of Universal Oil Products Co., Chicago, and is ready for commercialization.

For gas companies, the new process, which has been named "Autothermic Cracking," will reform propane or other volatile hydrocarbons in admixture with air to make supplementary gas to meet emergency peak load demands for home heating on exceptionally severe winter days.

For petrochemical manufacturers it will crack ethane, or other economically available volatile stock, converting it to ethylene, which is one of the most useful and versatile of aliphatic source chemicals, being the starting material for the manufacture of alcohol and other products.

## "Trade-Ins" Help Dealer Build Prosperous Appliance Volume

By S. W. ELLIS

IN the rear of an attractive little store on a highway near Little Rock, Ark., is a department filled with reconditioned wood and coal ranges that represent part of the \$85,000 yearly volume the owner does on LP-Gas appliances and systems.

Those reconditioned stoves are trade-ins accepted as part payment on bottled gas appliances. Without the trade-in, in many instances, Thomas A. Glass, the owner,

might have missed a profitable sale.

Operating as The Home Appliance & Hardware Co., Mr. Glass has made LP-Gas appliances and systems a major line that keeps growing in importance.

Thomas A. Glass, right, shows a customer some of the LP-Gas appliances he can buy by trading in his old-fashioned range.





Butane gas systems and appliances are a major line in this small highway store.

When Mr. Glass opened his hardware store five years ago, he selected his highway location because he had faith in LP-Gas appliances and systems to attract the customers he wanted to cultivate—farmers and suburbanites.

In his immediate neighborhood lived many prospective customers on small acreage. A little farther out were the "dirt farmers," many of them prosperous dairymen and egg and chicken producers.

As a former employee of a butane

gas distributor, he understood one characteristic of his prospects—farmers are shrewd traders. They do not buy a new article as long as they have a serviceable old one.

So Mr. Glass inaugurated his policy of taking in wood and coal ranges in trade on butane appliances of all kinds.

One employee devotes most of his time to reconditioning the traded stoves for resale in that rear department of the store. The stoves are put in good order, and then given a thorough cleaning and polishing, including all metal parts and enameled surfaces.

The reconditioned range is offer-

ed at a bargain price that just about covers the cost of reconditioning plus a small profit to take care of overhead.

The reconditioned ranges seldom remain in the store long, because farmers wanting a better wood or coal stove have learned where to find a good buy. And those farmers who come in for a used wood or coal range are future potential customers for butane systems and appliances.

#### Plants Seed in Farmer's Mind

"I never let a farmer buy a used wood or coal range without making him start wanting LP-Gas," says Mr. Glass. "Farmers make up their minds slowly, and it takes a little longer to put them in a buying mood. But when a farmer once starts modernizing his home, he represents hundreds of dollars in volume to the dealer who sells him bottled gas systems and appliances."

From this little store with floor space only 25 x 100 feet is handled a large volume in appliances and complete systems.

No gas tanks are displayed, because of the lack of space. Mr. Glass thinks that the space can be more profitably devoted to appliances.

He states that it is no longer necessary to demonstrate bottled gas, because every prospect has seen his neighbor use it. Besides, through signs on the store, regular newspaper advertisements, and his own personal salesmanship, he keeps his prospects reminded that he is prepared to sell gas systems.

Mr. Glass spends part of each day in calling at the homes of prospects. He analyzes their needs carefully, so that he can recommend the size of tank needed.

"If the prospect owns a wood or coal range that can be reconditioned for sale in the store," he said, "I start talking a trade. It pays me to let the customer trade up a little. That makes him feel that he is getting a good deal."

In the front part of the store are displayed at least one LP-Gas appliance in every category—a range, space heater, and water heater. No one can enter the store without being made bottled-gas-conscious.

Much of Mr. Glass's appliance volume comes from open accounts that bring the customer into the store often. They buy hardware on credit, and then they eventually want the butane gas system and all the appliances that go with it.

Promoting these gas systems and appliances is worth \$85,000 in additional annual volume to this little store on a busy highway.

#### New Company Will Operate In Carolinas and Virginia

A new corporation called the "Gas and Appliance Distributors, Inc.," has been organized with capital of \$100,000 to sell and distribute propane gas and appliances, with headquarters in Charlotte, N. C. The firm will distribute domestic ranges, commercial cooking equipment, water heaters and other gas burning appliances.

The new company will distribute in North and South Carolina and a small part of eastern Virginia.

# SALES SLANTS

## 18 Ways to Make Small Ads Pay

By ERNEST W. FAIR

**E**VERY LP-Gas dealer knows that small ads offer the best opportunity for promotion of his business within the budget he can afford to set up. Those who have tried to use large space at periodic intervals have seldom found it profitable to stretch their budget in this manner. Advertising must be consistent if it is to be successful.

The small ad offers one the opportunity to be a consistent advertiser. But there are many pitfalls in the use of these small ads. Dollars can be speedily wasted by lack of careful planning.

In the paragraphs to follow are a number of suggestions taken from the experience-stories of LP-Gas dealers in every section of the country; men who have used small advertisements with continued success. Most of these have been learned the "hard way."

**1. Be consistent.** Spotty use of advertising seldom pays off; it is the day-to-day pounding away that establishes the name and services of a butane or propane dealer. When the budget has been set up it should be so divided that the amount of space to be used in each insertion will permit as frequent insertions as possible. Many dealers set aside 2% of their gross for such advertising.

**2. Pick best days of the week.** Each dealer knows his own territory or his own city best. Good planning requires a thorough study to show when most people are near his office or when the opportunity for their being nearby is greatest. Those are the days which are **MUST** days for his advertising.

**3. Make the ads different from others.** Ordinarily, small ads are "buried" the easiest because of the multiplicity of them in the average publication. To prevent this it is a good policy to deviate from standard forms with small illustrations of an unusual nature of clever catch-lines.

**4. Use illustrations but don't buy them!** An illustration is excellent in an average small advertisement. The least expensive way to secure them is to use the mat service provided free for advertisers by almost every newspaper. These contain thousands of unusual small cuts which can be adapted to an eye-catching idea for an advertisement.

**5. Buy a schedule.** Advertising should be a regular routine of one's business; just like the rent or the utility bill. Rates are always cheaper on long contracts, more expensive on a day-to-day basis.

**6. Be brief and to the point.** It is never wise to seek to tell a story in a small advertisement. Messages which are curt and to the point make an advertisement of much more effect-

The salesman does not recognize overproduction; he tackles underconsumption.—W. Alton Jones.



P. T. symbolizes genuine Performance Tested Delta LPG Systems.

**STANOGAS, INC.**  
 MEMBER OF  
**TIN BROOK MALE**  
 Wholesale Distributors of L. P. Gas and Equipment

TELEPHONE 8476

OFFICE 1224 BUCKLEY  
 BIRMINGHAM, INDIANA



Top Photo: Charles L. Snyder, Inc., Lafayette, Ind.  
 Bottom Photo: Multiple tank storage for the installation.

Delta Tank Manufacturing Co.  
 Baton Rouge, Louisiana  
 Dear Mr. Elser:  
 Enclosed find picture of eight Delta Tanks installed on a garage in Lafayette, Ind. The heat loss of this building is 1,000,000 BTU. This building is heated with Bryant Unit Heaters fueled from the eight Delta Tanks. The cost of this installation was less than a central heating plant using oil or coal, and we have enough customer storage to take the customer thru the cold part of the winter.

May 15, 1949

Yours truly,

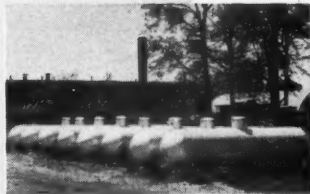
*W. L. Elser*

# PERFORMANCE *tells the story*

Performance in the consumer's installation is your final test of the LPG systems you sell and service.

That's why the Performance Tested reputation of Delta storage vessels—both tanks and ICC Cylinders—is so important to you.

Write today for complete information on how P. T. means "Profit Time" for you



## DELTA TANK MANUFACTURING CO. INC.

P. O. BOX 1469, BATON ROUGE, LA. • P. O. BOX 1091, MACON, GA.  
 Export Office: Suite 170, International Trade Mart, New Orleans, U. S. A.  
 MANUFACTURERS OF LPG PRESSURE TANKS AND I.C.C. CYLINDERS



tiveness, particularly when small space is being used.

**7. Design for plenty of white space.** No major advertiser crowds his space with copy and pictures—there's always ample white space to set off the layout and attract attention. The average small ad appearing in newspapers today is, on the contrary, loaded with type. White space sets any size ad off from others on the same page; gets more attention.

**8. Use a signature plate.** People remember names of firms better when they are written out in an unusual type or signature. These cost very little. Mats can be made from the original cut and one actual cut made to last many months.

**9. Get good position.** Newspaper ad offices are like any other business establishment and on this matter of position on the page it's the man who insists on attention to his advertisement who gets the best position. A buried ad can't pull well; always try to keep ad salesmen from burying your small ads.

**10. Give your small ad a purpose.** Just using space has been proved to be costly. A small ad should seek to sell the name of the firm, an idea, a special offer or something unusual about its business. Small ads are excellent for this purpose.

**11. Vary copy frequently.** Most newspapers make special rates for small ads when copy is unchanged over a long period of time. That's a good way to save a few advertising dollars, but if the same ad remains in use too long it is wasting money. Generally a month's time should be the absolute limit; change of copy weekly has been proven to be much better.

**12. Get near important ads if possible.** There are certain types of advertisements in newspapers which

have as high a reader interest as the news columns; department store layouts, for example. A small ad placed near one of these will have much better chance of being read by a maximum number of people.

**13. Pick the newspaper carefully.** Generally speaking, individual newspapers have group followings. Make certain that the paper being used is the one with widest possible circulation among the groups of people who are to be reached by your small ad.

**14. Tie in small ads with other advertising.** The theme of small ads should be carried into sign advertising within the office, direct mail and wherever and whenever possible.

**15. Use an occasional large ad in the series.** When business has been exceptionally good, boost the ad budget with use of larger space but pick the day of the week when an idea can be put over with maximum effectiveness and carry through the same theme and signature of the small ad series.

**16. Keep away from familiar type faces.** Ordinarily, if no other instructions are given, small ads are set in type styles and faces carrying a great deal of similarity. An off-the-beaten-track type style helps focus attention on your small ad.

**17. Watch seasons carefully.** Seasons of the year offer good opportunity for different ideas in small ads; changes should be made to conform with such seasons, holidays or events being held in one's community.

**18. Call attention to these small ads.** Cutting out a small ad and pasting it on a large cardboard, which in turn can be placed in the window or at the cash register, will help to secure more interest in the idea being pushed in one's small ad.

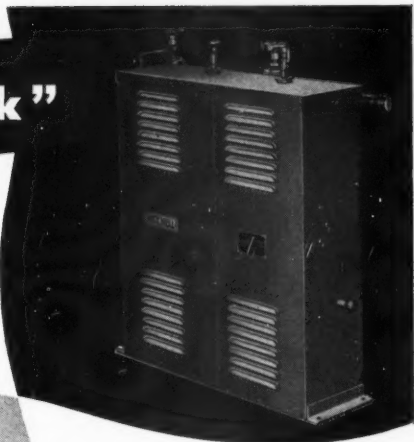
# now..

Model No. 70

Capacity: 70 Gallons per hour.

## "Feedback"

for  
**MITCHELL**  
vaporizers



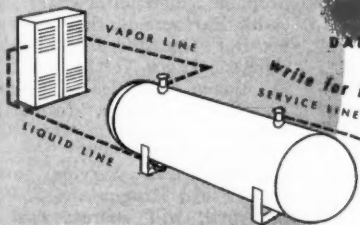
MITCHELL Models 70 and larger may now be equipped for automatically maintaining a minimum tank pressure on propane storage tanks. A special vaporizer burner control valve actuated by tank pressure is built into the vaporizer for this purpose. When tank pressure drops—for reasons of weather or consumption—below the set pressure of the control valve, vapor-

izer burners are automatically turned on. The vaporizer then operates to maintain tank at desired minimum pressure.

**JOHN E. MITCHELL COMPANY**

Manufacturers of fine machinery for over forty years

DALLAS, TEXAS



Write for illustrated booklet

on MITCHELL Vaporizer  
for all LP Gases.

Address:

John E. Mitchell Co.  
3802 Commerce St.  
Dallas, Texas





**TOP:** "Hidden Inn" is well named because of its location between the two huge rocks shown in picture. The front edge of the porch and chimney are all that show of the inn. Garage and gas system snuggle up to the big rock in foreground. **CENTER:** Camilio Tafoya, a Santa Clara Indian, is inspecting the Ranchogas supply tank serving the inn. **BOTTOM:** Interior of curio shop that solved its heating problem with L-P Gas.

*Photos: Courtesy Eaton Metal Products Co.*

## LP-Gas Warms Curio Shop In the Garden of the Gods

A chilly customer doesn't warm up to merchandise.

Mrs. Helen W. Stewart, of Colorado Springs, Colo., an experienced concessionaire, knew this very well and when she found that she could not keep her curio shop in Hidden Inn, in the famous Garden of the Gods, at a comfortable temperature, she went to an expert for advice.

R. Y. Mills of Ranchogas, Inc., Colorado Springs, analyzed her problem for her and came up with the answer. The room in question was only 18x45 feet, but an open stairway to the lunchroom and observation tower absorbed heat like water pouring into a sponge.

The answer was a Reznor heater with an input rating of 135,000 Btu hooked up to a 499 gallon w.c. "Bupro Gas System" built by Eaton Metal Products Co., of Denver.

Now customers are no longer chilly, Mrs. Stewart is happy and everybody is comfortable.

## Barstow, Calif., Plant Sold To Engineer Group

Liquid Gas Service Co. has succeeded Floyd Drago, butane and propane distributor of Barstow, Calif. Partners in the new operation are I. F. Omwake, former sales engineer for Leeds-Northrop Co.; Robert M. Bohen, electrical engineer; and Harold N. Fuller, formerly with Southern California Gas Co. and Petrolane, Ltd.

Liquid Gas Service, purchased from Floyd Drago and J. C. Myers in April, will operate east to the California state line in San Bernardino county and in the vicinity of Barstow.

## 2nd Safety Issue Endorsed By LP-Gas Industry Men

Interest in safe operations in the liquefied petroleum gas industry is increasing markedly, if the reception given the June, 1949, safety issue of BUTANE-PROPANE News can be taken as a criterion.

Like the 1948 safety issue, it met with widespread approval, as indicated by the host of post-publication requests for the book, supplementing the thousands of advance orders. The universal need for this sound presentation of safety recommendations to the industry has been recognized by leaders, and their approval of this year's issue is emphasized by numerous letters recently received.

One of them says, "Congratulations and a lot of them on the safety issue, both text and pictures. It is more graphic, more complete, more attention-getting, easier to read than ever."

Several other letters representative of many more received, are quoted herewith:

### Mexico City

We are asking you whether you would offer any objection to the use by this Bureau of Standards of the data contained in the above mentioned issue for purposes of official application in regulations concerning this material.

We would appreciate your sending us as soon as possible two copies of the above mentioned June issue, advising us of the manner in which payment is to be made. Also, with respect to your authorization for the use of the interesting data you publish.

Thanking you for the attention you are kind enough to give to us, we are pleased to extend to you the assurance of our high regard.

Office of Secretary of Economy,  
Bureau of Standards,  
The Assistant Chief In Charge Of  
The Office  
Roberto Galvez  
Chemical Engineer

### Minneapolis

Congratulations on the 1949 Safety Issue—  
copies of which just arrived.

I confess that when I saw the 1948 issue I wondered what you could possibly do in another year. Well, you've done it. This is a masterful work, of much value to the industry, and one of which the publishers of Butane-Propane News can be proud.

I am happy to have such a fine publication for regular handy use.

With my kindest regards, I am,

Elwin Hadlick,  
Executive Vice President,  
National Butane-Propane Assn.

### Hoosick Falls, N. Y.

Would you please advise if we may obtain copies of the chart of orifice sizes in your June issue of Butane-Propane News.

If so, please advise what the price will be. We wish to purchase 36 sets of them.

Blue Flame Gas Co., Inc.  
Ralph Liporace,  
President.

### Elizabeth City, N. C.

Please find enclosed our check in the amount of \$10 for which we request you to send us five copies of BUTANE-PROPANE News annual safety issue No. 2 of June, 1949.

This is a splendid issue and you are to be complimented on getting out such a needed book.

Elizabeth & Suburban Gas Co.  
C. C. Lamar,  
Manager.

### Lincoln, Neb.

In your June issue you have inserted a folder on safe installation requirements. Would it be possible to get 500 reprints of this, and if so, what would be the cost?

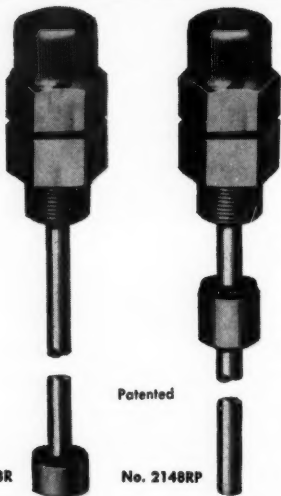
Also, please quote us price for 5 copies of Annual Safety Issue No. 2, June, 1949, as we would like to place these copies in the hands of our special agents.

Farmers Mutual Ins. Co. of Neb.  
H. J. Requantte,  
Secretary.

Extra copies of the June safety issue were printed and those who did not order before publication and those who want additional copies to distribute to employees and others may obtain them by writing BUTANE-PROPANE News 198 S. Alvarado St., Los Angeles 4, Calif. The price of the safety issue is \$2 per copy.

# FOR ACCURATE AND SAFE

## REGO SLIP TUBE GAUGES



No. 2148R

Patented

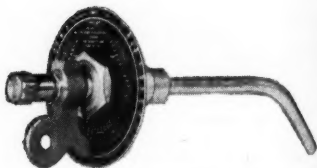
No. 2148RP

The **REGO No. 2148R Slip Tube Liquid Level Gauge**, which features simplicity of design, durability in construction and accuracy in operation, provides a positive means for gauging the liquid fuel content of LP Gas system containers and storage containers.

The **REGO No. 2148RP**, in addition to serving as a slip tube gauge, performs the added function of a fixed tube gauge, thus providing a single unit which gives two important readings.

A Duo-Gage model, designed for containers more than six feet in diameter is also available. In this application, one gauge measures the liquid level in the lower half of the container and one gauge measures the liquid level in the upper half.

## REGO ROTOGAGES



No. 2572

Patented

Contents of cylindrical or spherical containers, in stationary or mobile installations, may be quickly and accurately measured with the Rego Rotogage. This gauge is suitable for end or side mounting and is furnished in two sizes. The small size is for use on stationary containers up to 60" in diameter, or for mobile fuel tanks up to 24" in diameter. The large size is designed for use on stationary bulk containers greater than 60" in diameter or for mobile fuel tanks greater than 24" in diameter.



The **BASTIAN-BLESSING** Company

4201 West Peterson Avenue

Chicago 30, Illinois

PIONEER AND LEADER IN THE DESIGN AND MANUFACTURE OF  
PRECISION EQUIPMENT FOR USING AND CONTROLLING LP GASES



COMMERCIAL SYSTEMS  
INDUSTRIAL SYSTEMS  
UNDERGROUND CONTAINERS  
TANKS  
DOMESTIC SYSTEMS

*Specify*

**REGO**

## **REGO's Complete Line of LP Gas Liquid Level Gauges Enables You to Select the Exact Type and Size for Every Container Application**

Scientifically designed and accurately constructed, RegO gauging devices are the choice of experienced LP Gas producers, distributors and dealers, because they know that RegO gauges provide the accurate fuel readings necessary in handling LP Gases.

Use of RegO gauges in LP Gas systems provides an important safety factor in helping to avoid hazards due to overfilling, and, in addition, they afford an accurate means for computing fuel inventories and determining rate of use.

No matter what type, size or shape container is used, there is a RegO gauge specifically designed to provide easy, safe and accurate readings. Complete details on the design, construction and operation of RegO gauges will be found in RegO Catalog Section LJ.

**The REGO No. 3163 Fixed Tube Gauge** provides a simple and accurate means for determining when a container has been filled to the maximum permitted level. It is equipped with a lock-spring which prevents the valve from opening when subjected to vibration. This feature makes it ideal for use on trucks, tractors, ICC cylinders and similar applications where vibration is encountered.

When used on stationary containers, the gauge is available without the lock-spring. Both models are available with or without dip tubes.



No. 3163

**REGO**  
LP GAS EQUIPMENT

Marked by  
These Distributors Representatives  
GAS EQUIPMENT CO.  
Culham, Texas  
GAS EQUIPMENT SUPPLY CO.  
Atlanta, Ga.  
WESTERN GAS EQUIPMENT CO.  
Beverly Park, Calif.  
A. C. FINE, S. A., Mexico, D. F.  
EMPIRE BRASS MFG. CO., LTD.  
London, Canada

## READING

### **Second Hydraulic Society Book Covers Pipe Friction**

The results of an investigation undertaken during 1946-1947 to revise "Pipe Friction" data, have been published by the Hydraulic Society, 90 West St., New York 6. The new data are based on a paper entitled "Friction Factors for Pipe Flow" by Lewis F. Moody, professor of hydraulic engineering, Princeton University, and published in the 1944 ASME Transactions.

Issued under the title "Tentative Standards of Hydraulic Institute Pipe Friction," the data have been presented as tentative to provide a suitable experience period. Following the date set for the expiration of this data as a tentative standard, the Hydraulic Institute plans to review this subject again for designation as standard.

A partial list of the contents includes tables of friction loss for water, information on old pipes, charts of friction loss for any fluid, friction factors, valves and fittings, etc.

### **New Book, "Trade Marks," Will Aid in Name Selections**

There is probably no industry in which so many business names have been coined as the liquefied petroleum gas industry. This has resulted in some duplication of phrases and a consequent confusion.

Recently a book has been published which may be helpful to dealers throughout the nation in determin-

ing upon trade marks and company names. The book is entitled "Trade Marks" and the author is H. Bennett, technical director of Glyco Products Co., Inc. The book is published by the Chemical Publishing Co., Inc., 26 Court St., Brooklyn, N. Y., and sells for \$10 per copy.

The book outlines the principles of trade mark selection that will enable the reader to eliminate a great deal of time, money and effort usually involved in the choice of a trade name.

The four different ways of finding or coining original names given in this book will make it easy to choose between a good and poor trade mark. The difference between these is often equivalent to the difference between a mediocre and a highly successful business.

LP-Gas dealers, engineers and others will welcome this book which gives a comprehensive, up to date alphabetical list of trade mark chemicals and other products, showing chemical compositions and manufacturers. Much of the information has never been published before.

The book treats of legal aspects of trade marks and the coining of trade marks, in addition to trade mark listings.

### **Chemistry, Physics Handbook Is Scientific Encyclopedia**

The Handbook of Chemistry and Physics, which has just appeared in its 31st edition, is widely accepted as a highly important reference book in its field. Compiled in five sections, it



**Expand Your Market  
To Include L. P. Gas  
For Heating**

**Sell CLOW  
Gas-Fired Unit Heaters  
For Business and Industry**

**For Use With  
Liquefied Petroleum Gas  
MADE IN 3 SIZES**

85,000 B.t.u. per hour input  
120,000 B.t.u. per hour input  
150,000 B.t.u. per hour input

Every time you sell a Clow Gas-Fired Unit Heater to a business establishment, you've secured a large-volume customer for your L.P. gas sales. Here's your big *new* market, today . . . L.P. gas for *heating* in stores, factories, warehouses, filling stations, garages, bowling alleys and other commercial buildings. Remember summer time is replacement time. Start selling now for fall installation.

**These Exclusive Clow Features  
Make Your Selling Job Easier**

- Longer life with ONE PIECE Cast Iron heat exchanger.
- READILY ACCESSIBLE for easy cleaning and servicing.
- QUIET operation. PLEASING design. ATTRACTIVE finish.

**Write for free Copies of  
Descriptive Folders Showing Price.**

**JAMES B. CLOW & SONS**  
201-299 N. Talman Ave. • Chicago 80, Ill.

includes complete mathematical tables; properties and physical constants of the elements; properties of organic and inorganic compounds; chemical tables; tables of specific gravity; properties of matter; heat and hygrometry; sound; electricity and magnetism; light; conversion tables; photographic formulae; table of plate and film speeds.

Much new material appears in the 31st edition. Information for heating and ventilating engineers appears in seven different chapters.

In step with the trend toward more intensive study of nuclear physics, a table of isotopic masses has been included; also a table of wave lengths of the principal lines in the emission spectra of the elements. This table is taken from data only recently available. Complete revisions and new material added to the Handbook amount to 180 pages.

The Handbook of Chemistry & Physics is edited by Charles D. Hodgman, M.S., and published by the Chemical Rubber Co., 2310 Superior Ave., Cleveland, Ohio. It contains 2756 pages; is 4½ by 7 inches, has a cloth binding and the price is \$6.

## Cathodic Protection for Hot Water Storage Tanks

"Cathodic Protection of Galvanized Hot Water Storage Tanks by Use of Galvanic Magnesium Alloy Anodes" is Education Bulletin No. EB-104 published by the Cleveland Heater Co., and prepared by D. J. Fergus, research engineer.

Corrosion problems are discussed in detail. The results of tests are presented by Mr. Fergus in the 16-page booklet. Discussion titles include soft water tests, distilled water tests, and methods of current control. Illustrations and tables are used.

Copies of the report are available for 25 cents from the Cleveland Heater Co., 2310 Superior Ave., N.E., Cleveland, Ohio.

## Information Pamphlet on LPG Issued by Bureau of Mines

To supply information to the rapidly increasing number of domestic and commercial consumers of butane and propane fuels, the Bureau of Mines has issued an information circular describing the properties and safe handling of these fuels, Bureau Director James Boyd has announced.

Besides telling what propane and butane are and outlining their uses, the circular answers such common questions as what safety precautions must be taken in handling them, how they are transported, are special valves and fittings necessary, can they be burned in any gas burner, what constitutes a domestic installation, and how industrial plants and public utilities use LP-Gas fuel.

A free copy of Information Circular 7519, "Questions and Answers on Propane and Butane Fuels," by J. F. Parkley, Chief, Fuels Utilization Branch, Bureau of Mines, may be obtained by writing to the Bureau of Mines, Publications Distribution Section, 4800 Forbes St., Pittsburgh.

## Early Omaha Blaugas Co. Shortens Corporate Name

In order to identify its name more closely with the product marketed and to eliminate the localized character of its present name, the Omaha Blaugas Co., Omaha, Neb., has changed its name to Blaugas Co.

According to L. R. Forsyth, president of the company, there will be no change in the corporate structure of the company nor in its policies, location of offices or plants.

# Safe Use of LP-Gas In Domestic Installations

The accompanying article is No. 7 in a series of printed information upon liquefied petroleum gas published by the Accident Prevention Department (formerly the National Conservation Bureau), Association of Casualty & Surety Companies, and is printed by permission.

The series has been prepared by a special gas research committee of the above named organization composed of engineers of member companies who have made a special study of LP-Gas.—Editor.

## Introduction

**L**IQUEFIED petroleum gases for domestic uses consist primarily of propane or butane or mixtures thereof. Under ordinary temperatures and atmospheric pressure these materials exist in a gaseous state. For transportation and storage purposes, they are, however, liquefied which is accomplished by subjecting them to pressure. Additional information on various phases of this subject will be found in other pamphlets of this series.

Liquefied petroleum gases were first used on a large scale for domestic purposes such as cooking, water heating, refrigeration, lighting and space heating. Although these gases are now widely used in various industrial and commercial establishments, homes beyond the mains of public utilities continue to be the largest type of consum-

ers. Furthermore, domestic consumption is increasing because of new installations and additional uses in existing installations.

Domestic consumers generally depend upon those selling, installing, and servicing systems and appliances for safety and economy in their installations. It is, therefore, very important that each dealer and supplier take every precaution to make installations as safe as possible, complying with all requirements of authorities having jurisdiction and in addition with the standards of the latest issue of the National Board of Fire Underwriters Pamphlet No. 58. Furthermore, since fires and explosions can and do occur from misuse of these gases, every effort should be made to educate the consumer in the safe use of liquefied petroleum gases and appliances. Dealers should, therefore, inaugurate an appropriate educational program as an integral part of their operations.

Each purchaser of appliances for use with liquefied petroleum gases should be given explicit operating instructions by the installer and a card or list of operating instructions should be left with the new user.

## Gases Used in Domestic Installations

In the cooler parts of the country propane is generally used in



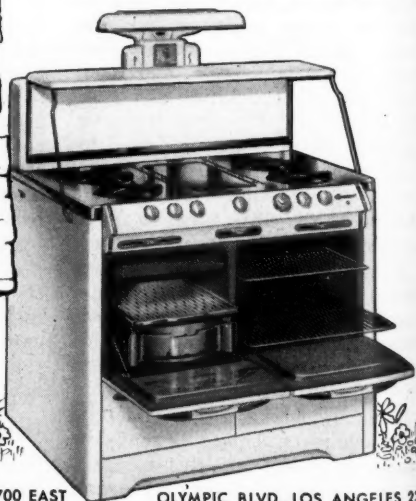
**More extra, Exclusive Features!**  
The only range with  
GRILLEVATOR BROILER  
KOOL CONTROL PANEL  
VANISHING SHELF

**Customer Preference!**  
Notice how many women  
ask specifically  
for O'Keefe & Merritt.

**12 Models  
from which to choose!**  
Each a leader in value.

# O'KEEFE & MERRITT *Ranges* **are So Easy to Sell!**

It's to your profit to give your customers more for their money! Each of O'Keefe & Merritt's 12 models leads its price class in features your customers want—*extra, exclusive* features your customers recognize as thoughtful aids to better, carefree cooking... distinctly O'Keefe & Merritt. Write today for complete details on the O'Keefe & Merritt line.



**O'KEEFE & MERRITT CO.** 3700 EAST

OLYMPIC BLVD., LOS ANGELES 23

BUTANE-PROPANE News

domestic systems because it readily goes from a liquid to a gas at all temperatures above  $-44^{\circ}\text{F}$  if at atmospheric pressure. Butane is seldom used because it is not self vaporizing below  $33^{\circ}\text{F}$ . In warmer parts of the country, butane and mixtures of butane and propane are frequently used. If butane is used in areas where the temperature may go below  $33^{\circ}\text{F}$  vaporizers are often necessary to heat the liquid to ensure proper vaporization under all conditions.

Regardless of the kind of gas used, it is imperative that it be effectively odorized. The odorization should indicate the presence of gas in air down to concentrations by volume of not over one-fifth the lower limit of combustibility. Whenever installations are made or when new users are serviced, a point should be made to acquaint such consumers with the odor of the gas so they will be familiar with it should leakage occur. The serviceman should, furthermore, explain the precautions necessary when leakage of gas is detected.

#### Containers for Gas Supply

Liquefied petroleum gases for domestic systems are stored either in (1) portable cylinders which are replaced when empty as in the self-service and two-cylinder systems, (2) semi-portable cylinders which are kept in position and refilled at regular intervals by pumping liquid from a tank truck, such as in some one-cylinder systems, or (3) permanent storage tanks above or below-ground which are refilled entirely from tank trucks.

#### Cylinder Installations (Bottled Gas)

All cylinders should be constructed, tested, maintained, and regularly retested according to the requirements of the Interstate Commerce Commission.

Cylinders should be located outside of buildings aboveground, away from windows and doors. Although accessibility is essential, care should be taken not to place cylinders too near driveways or at "blind" corners where they might be struck by passing vehicles.

To avoid the dangers of settling, the cylinder should be set on concrete foundations. Provision should be made for proper drainage of water from and around the foundations to prevent its settlement. The connections from the cylinder to the fixed piping should be of the flexible type to prevent breaking of the connections due to foundation settlement, or from the movement of cylinders during replacement, recharging, or weighing operations.

All cylinders should be provided with fusible plugs or spring-loaded safety relief valves or both as required by the Bureau of Explosives. The discharge from these safety devices should be at least five feet horizontally away from any building openings which are below the level of such discharges, as for example cellar windows. Such discharge should not terminate in any building nor beneath any building unless such space is well ventilated to the outside.

Cylinder valves, manifolds, and regulator assemblies should be protected from rain, snow or ice, and

tampering with by children or unauthorized persons. Ventilated metal hoods or cabinets of the lock-up type offer suitable protection against these exposures.

The ground around cylinders should be kept free of combustible materials such as long grass, weeds, brush, leaves, paper, etc., to prevent exposure to possible fires from these sources. The burning of rubbish should not be done in the vicinity of cylinders. Other sources of ignition such as electric wires, electrical apparatus, unprotected electric lights should be kept away from cylinders.

The changing or charging of cylinders should be done only in daylight. Open flames, smoking, or the running of motor vehicle engines in the vicinity should also be prohibited during such operations. If the engine of the truck is being used to operate the liquid pump in the filling operations, the truck should be parked at least 15 feet from the cylinders being filled. If emergencies require cylinders to be charged or changed at night the use of oil or gas lamps, or lanterns, should be avoided. An Underwriters' Laboratories approved electric flashlight could be used, but it is better to provide a permanent electric light remotely located. All electrical equipment should be approved for Group D, Class I, hazardous locations of the National Electrical Code. The lights should be so located that the cylinders, regulating valves, and ground nearby are well illuminated when needed.

Cylinders which are recharged at the point of utilization should be provided with excess flow or back pressure check valves to prevent discharge of the contents of cylinders in event of failure of the filling or equalizing connections. If the contents of such cylinders are not determined by weighing they should be equipped with accurate liquid level gauging devices approved by the ICC Regulations. It is highly important that servicemen be cautioned not to fill these cylinders beyond the point indicated by the gauging device.

### Tank Installations

Both above and belowground tanks are employed in domestic installations. Where used, tanks should be constructed and tested in accordance with the requirements of the ASME or ASME-API Codes for Unfired Pressure Vessels.

Aboveground tanks should be located away from buildings or the lines of adjoining properties at distances prescribed in Pamphlet No. 58, or by the governing authorities. When selecting a site, consideration should be given to accessibility so that tanks can be readily serviced from tank trucks. Their location, however, should be such that they are not unduly exposed to passing vehicles.

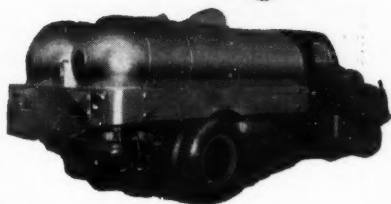
Aboveground tanks should be coated with a reflecting paint.

The fire precautions suggested in connection with cylinder installations in Paragraph 10 of this pamphlet, apply also to aboveground tank installations.

The first step in deciding upon a

# Check it for Service, Check it for Safety, Check it for Savings!

Low **LMC** Mileage Cost



**Your 1949  
LMC Home  
Delivery Unit**

**Makes you money by saving you:  
TIME**

1. Butane and Propane transported and dispensed from same truck.
2. Hose can be hooked up and placed on skirts behind hooks.

#### LABOR

1. Short skirts collect less mud and snow; give more clearance in deep ruts; more wheel clearance in putting on and removing chains.
2. Flexible coupling in tank header and between pump and tank header.
3. Pumping equipment can be arranged for pumping in tank, out-of-tank or across tanks.

#### MONEY

1. Lightweight, low center of gravity, streamlined design; and large capacity pump, lines and valves allow you a higher payload, greater durability of truck and tires.
2. Low initial cost includes complete mounting, plumbing rearrangement and replacing of truck exhaust and muffler to front of truck. Also full clearance lights, directional signal and large stop light.
3. Needle bearing universal joints with square shaft, allow axial movement of shaft which increases life of joint, makes pump replacement easier.
4. Tanks can be furnished in ASME code No. U-69 or No. U-201.

**TRANSPORT  
TANKS**

**STORAGE  
TANKS**

**DOMESTIC  
TANKS**

**SKID  
TANKS**

## LUBBOCK MACHINE CO. INC.

Lubbock, Texas, Ph. 6006, Box 1138

LMC—LOW MILEAGE COST—LMC—LOW MILEAGE COST—LMC



site for an underground tank is to locate active or abandoned house drains, sewer mains and water mains. The tank should not be buried near such underground piping because leakage from the tank or fittings may follow such piping into the buildings.

When it is necessary to bury tanks in corrosive soils, the shells and heads should be of thicker metal than in the case of surface tanks. Moreover, if the ground is very corrosive, tanks should be encased in concrete.

A firm foundation is necessary and the surrounding soft earth or sand should be well tamped. In preparing a tank excavation, it is suggested that five or six inches of sand be placed and tamped in the bottom of the hole upon which the tank can rest.

#### **How To Protect Tank**

All buried tanks prior to being placed underground, should be given a protective coating equivalent to hot dip galvanizing or to two preliminary coatings of red lead, followed by a heavy coating of coal tar or asphalt. Before a tank is lowered into the excavation, it should be carefully examined to make sure there are no spots where this protective coating has been damaged.

A bare spot will invite corrosion and in a comparatively short time leakage may develop. Bare spots should, therefore, be cleaned and repainted. The container should be lowered so as to prevent abrasion or other damage to the coating. After a tank is lowered the

filling should first be of soft earth containing no hard earth, pebbles, rocks that might injure the coating.

If the job of placing a tank is not completed in one operation, the excavation should be guarded by substantial barriers. Furthermore, such excavations should be posted with suitable warning signs and they should be illuminated at night.

#### **Must Protect Fittings**

Before underground tanks are installed a check should be made to see that fittings are tight and suitably protected against damage. If fittings cannot be protected then extra care should be taken when lowering the tanks before tanks are lowered into their excavations.

Tanks buried underground should be placed so that their tops are below the established frost line, but in no case less than two feet below the surface of the ground. When necessary to prevent floating where high ground water levels occur, tanks should be securely anchored or weighted.

Both aboveground and buried tanks should be fitted with spring-loaded safety relief valves and these valves should be arranged to afford free vent to the outside atmosphere with the point of discharge not less than five feet horizontally away from any openings into buildings which are below such discharge.

Liquid level gauging devices should be provided on all tanks. Such devices, other fittings and piping should meet the requirements of the latest revision of the

NBFU Pamphlet No. 58, or that of the governing authorities having jurisdiction.

### Systems

The systems for domestic service are of two general types—one in which the fuel enters building as a gas, and one in which it enters as a liquid. In the latter system the liquid is vaporized in a special vaporizer or in the burner itself by means of a preheater section. Such systems are considered more hazardous than systems in which only gas enters the buildings.

In domestic installation, no liquid or gas should enter buildings at more than 20 pounds per square inch gauge. Containers and first stage regulating equipment should be located outside of buildings other than those especially provided for this purpose.

Piping, fittings, and valves should be of a type approved for use with liquefied petroleum gases. Wrought iron, steel, brass or copper pipe or seamless copper, brass or other approved non-ferrous gas tubing can be used. All piping should, however, be suitable for a working pressure of not less than 125 pounds per square inch gauge. Piping and fittings should be extra heavy up to the first pressure reducing valve so as to withstand the pressure in the tank.

All screwed valves, fittings or other connections should be sealed against leakage by the use of a joint compound that will provide a pure non-metallic film. The compound should provide protection

against corrosion or deterioration, making a perfect seal, not take a permanent set, make it possible to remove valve or fittings at any time without damage, not be soluble in water, oil or liquefied petroleum gas and withstand a pressure of 250 pounds per square inch gauge. Ordinary pipe dope should not be used. Joints on gas tubing should be made by means of approved gas tubing fittings.

All systems should be tested and listed by Underwriters' Laboratories. All systems should be checked by competent installation men and should be inspected and approved by enforcing authorities (if any) having jurisdiction before they are placed in service.

### Appliances

All gas consuming appliances and accessories should be approved by the American Gas Association Testing Laboratories or tested and listed by the Underwriters' Laboratories Inc.

After appliances are installed they should be checked and operated before they are turned over to consumers. The proper operation of appliances should be fully explained to consumers after they are ready for service. Time taken for this purpose will reduce the possibility of dangerous practices which may lead to explosions and fires.

### Customers' Complaints

Customers' complaints should be thoroughly investigated and where they involve the safe operation of installation immediate steps should

be taken to rectify any condition which might eventually lead to an explosion or fire.

#### **Customers' Agreements**

Written agreements should be made between the dealer and gas user covering the period of agreement, ownership of the installation and equipment, its maintenance and safe use, permission to enter premises, gas charges, gas shut off, removal of equipment, and payments.

#### **Customers' Education**

Instruction leaflets regarding the safe use of appliances should be prepared and distributed to customers.

#### **Accidents**

Dealers should investigate and endeavor to determine the cause of accidents in connection with their respective installations and action should be taken to prevent recurrences.

### **Shell Develops Method For Rust-Proofing Metal**

It is now possible to rust-proof tools, engine parts, fine instruments, and other metal articles without greasing or sealing air-tight, simply by wrapping them loosely in a chemically treated paper, according to Dr. M. E. Spaght, president of Shell Development Co. Shell Development is the research affiliate of Shell Oil Co.

Key to the new method of preventing rust is a special chemical developed by Shell and marketed under the trademark VPI, for vapor phase inhibitor. Ordinarily kraft paper is

coated on one side with VPI. Then, after a metal article has been wrapped in this paper, the chemical slowly vaporizes inside the package, neutralizing the corrosive action of moisture in the air.

### **Northern Pacific R. R. Installs Bulk Plants at Terminals**

The Northern Pacific railway has just completed installation of an 18,000-gallon propane gas storage tank at its Third St. yards in St. Paul to enable purchase of propane in car lots for company use. The installation includes a small steel building to house the pumps and charge bottles and a covered platform for storage of empty and charged cylinders.

A similar installation of a 15,000-gallon tank is under way at King St. station passenger car yards in Seattle. King St. station is operated jointly by the Northern Pacific and Great Northern Railways. The two installations will cost approximately \$64,000.

Northern Pacific uses propane gas for air-conditioning units on passenger cars, for cook stoves on North Coast Limited dining cars, for some welding operations and for track switch heaters where electricity is not available.

### **L. B. Pettit, N. J. Operator Is Now With Gas Products Co.**

Word has been received that L. B. Pettit has joined the City Gas Co., of Newton, Flemington and Phillipsburg, N. J.

Mr. Pettit formerly was with Gas Products, of Three Bridges, N. J., where he served as company secretary and manager. He is also a member of the board of directors of the New Jersey LP-Gas Assn.

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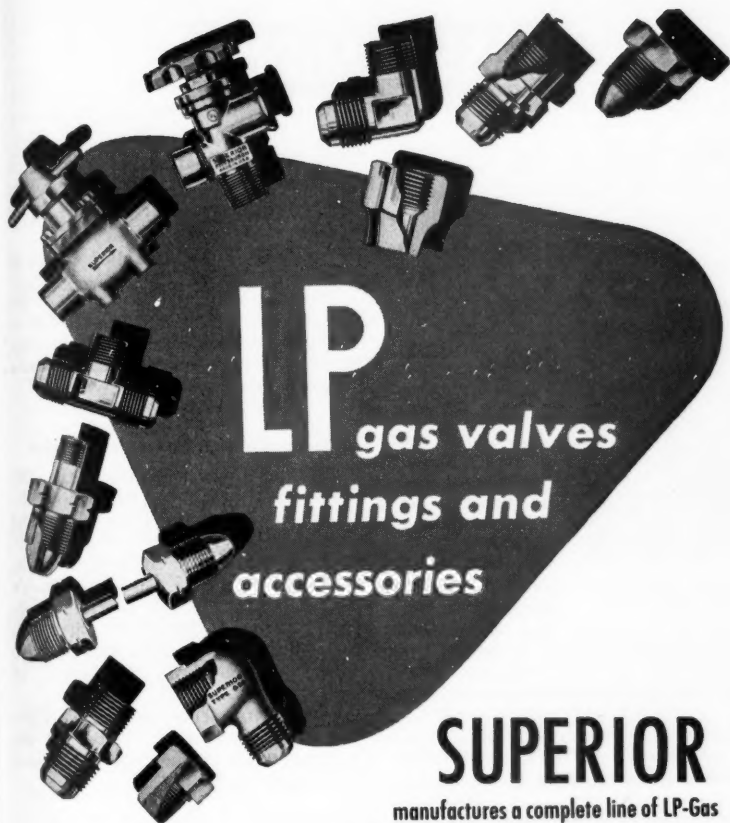
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News



# LP

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manufactures a complete line of LP-Gas  
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Various types of cylinder valves listed as  
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AUGUST — 1949

101

# ASSOCIATIONS

## NBPA Shortens Convention, Eliminates Trade Exhibit

Of immediate interest to the industry comes the announcement from the board of directors of the National



E. E. HADLICK

Butane-Propane Assn. that the dates for the scheduled convention at the Jefferson hotel, St. Louis, for Sept. 19-21 have been shortened to Sept. 19-20, and that the contemplated trade exhibit will not be held. The two days of the convention will be devoted exclusively to meetings. The location will be the same—Jefferson hotel.

According to E. E. Hadlick, executive vice president of the association, the contemplated trade exhibit has been canceled because of an absence of new models of appliances and because the present state of the market makes maintenance of a trade exhibit too great a burden on the manufacturers.

The directors also adopted the following program for the elimination of re-testing of cylinders and inaugurated a program for testing and re-testing of safety relief valves:

"1. Repeal all provisions of Campbell's Freight Tariff No. 4 requiring retest of liquefied petroleum gas cylinders because of lapse of a certain period of time.

"2. Add requirements to the same tariff providing for—

"a. Use of a safety relief valve on all liquefied petroleum gas cylinders;

"b. Initial manufacturer's test of safety relief valves; and,

"c. Retest of safety relief valves at specific intervals."

The directors met at Grand View Lodge, Nisswa, Minn., in order to take advantage of the cooler weather obtainable among northern Minnesota lakes at this season of the year.

## LPGA—North Eastern District

Talks on the economics of the LP-Gas industry, safety, legislative developments, electrical competition and the widening scope of LPGA activities are included in the program tentatively drafted for the association's annual North Eastern District meeting to be held in New York City Sept. 15-16, according to John Van Norden, American Meter Co., chairman of arrangements.

Sessions are scheduled for the Penn Top of Hotel Statler. Dates of the meeting were erroneously announced last month as Sept. 14-15.

## AGA

The general nominating committee of the American Gas Assn. has nominated 33 gas industry executives to guide the operation of the association for the 1949-50 fiscal year, H. Carl Wolf, managing director, AGA announced recently. The committee's nominations will be submitted to the membership for election at the annual convention in Chicago, Oct. 17-20.

Hugh H. Cuthrell, vice president,

The Brooklyn Union Gas Co., Brooklyn, has been nominated for president; D. A. Hulcy, president, Lone Star Gas Co., Dallas, for first vice president; George F. Mitchell, president, The Peoples Gas Light & Coke Co., Chicago, for second vice president, and Edward F. Barrett, president, Long Island Lighting Co., for reelection as treasurer.

## NGAA Southern Meeting

The Southern regional meeting of the NGAA in cooperation with the East Texas Natural Gasoline Men's Club is to be held Oct. 14 in Tyler, Texas. Headquarters hotel is to be the Blackstone.

Sessions and luncheon will be held in the Women's Club and the dinner and "Cooling Tower" will be in the American Legion hall. The latter place is about halfway between the Blackstone and the Plaza hotels, a matter of less than three blocks either way. The Blackstone has four air conditioned floors while the Plaza, a newer but smaller hotel, is air conditioned throughout.

It is suggested that those who expect to attend make reservations as soon as possible.

## South Dakota

Martin A. Steinlicht, Home Gas & Machinery Co., Mobridge, S. D., was elected president of the South Da-

kota Liquefied Petroleum Gas Assn. in June. He succeeds E. J. Gustafson.

Other officers elected are Millard Kiel, Highmore, vice president, and Leo Butler, Britton, secretary-treasurer.

An interesting development at the meeting was the proposal that the association collect a fund of money from its members to inaugurate a self-policing plan of the industry in South Dakota. Under this plan, the association would employ inspectors who have intimate knowledge of the industry and have them deputized by the state fire marshal to inspect all installations.

Dealers would be required to notify the marshal's office by mail so that every new installation could be personally visited by one of the inspectors.

## Long Island

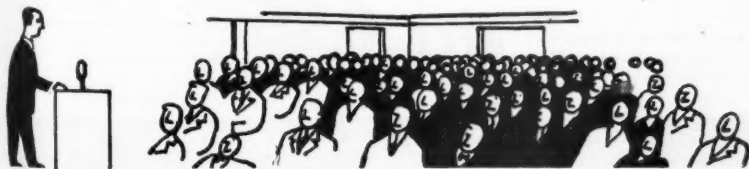
A general meeting of the Long Island Liquid Petroleum Gas Assn. has been tentatively set for Sept. 29, and the hour and place will be announced later.

Committees of the new association are now functioning, following a meeting of the association's board of directors June 8, called by Dudley Merrill, president, for the purpose of selecting committees.

The board appointed the following committees:

Association coordination — Dudley Merrill, chairman; John Lockwood.

Membership — Harry Oppenheim,



# Yes

## NEW TOOLS FOR L-P GAS



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*For Anyone Who Now Uses  
A Gasoline Blowtorch*

THERE'S A TREMENDOUS MARKET FOR  
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These torches burn L-P Gas and Atmospheric Air—are lighter, more flexible, more economical, handier in every way when used with small portable tanks. No Oxygen Tank Or Air Compressor Necessary.

C48-B (left) produces 3" wide flame for paint removal, installing tile and other jobs where wide flame is desirable.

C48-P (above) for general purpose work. Variety of burners available.

Both torches are equipped with Weldimatic trigger control—when you release the trigger, the working flame is reduced to a small pilot.

If you want to cut steel with L-P Gas and Oxygen—Write for information.

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chairman; Larry Glover, Austin Byrne.

Program—Harry Neumann, chairman; Art Wastie, Lou Seley.

The association coordination committee will work with the national association on any matters of interest to the members.

The membership committee, the minutes reported, will function as the "watch-dog of the association." Members of the committee will contact personally any new dealers in the bottled gas business to acquaint them with the association and its work.

Work of the program committee "embraces the educational, safety and insurance phases of business." It has plans under way to bring an outstanding speaker on the subject of safety for the next meeting.

Members of the board of directors are Dudley Merrill, Art Wastie, Lou Seley, Walter Peterson, Harry Oppenheim, Warren Tompkins, Charles Berry and C. W. Pulver.

## New Jersey

### By ED TITUS

Legislation was a paramount topic as the New Jersey Liquefied Petroleum Gas Assn. gathered for a general meeting at the Far Hills Inn, Somerville, N. J., June 28. Eighty-nine attended the occasion which was featured by an excellent dinner, followed by frank discussion and entertainment in the form of motion pictures.

Ezra W. Karkus, Keyport, counsel for the organization, de-



ED A. KEIBLE

scribed the legislative situation. He

described the legislative situation. He told how New Jersey legislation, which was hastily drawn and would have placed an unfair burden on the industry, was combatted. It was replaced by an assembly joint resolution directing the attorney general to participate in drafting of reciprocal legislation governing the transportation and storage of flammables, with the states of Delaware, Pennsylvania, and New York.

### Industry Legislation Discussed

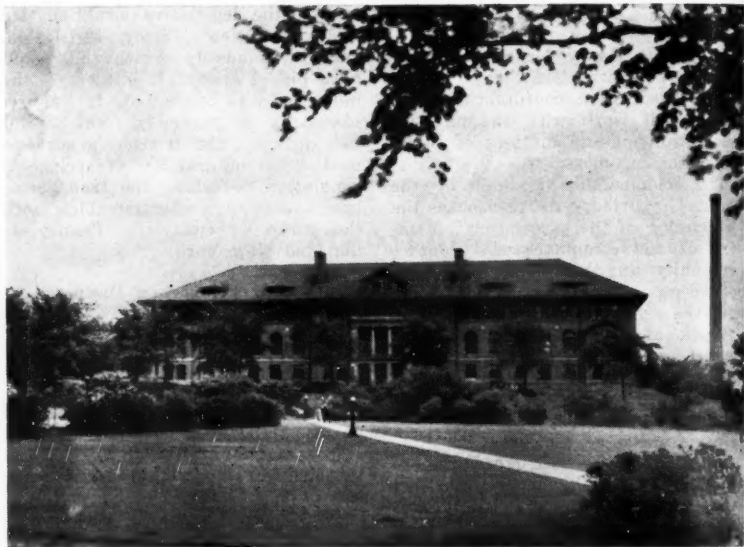
The association's representatives, Mr. Karkus said, are concerning themselves both with weights and measures legislation and safety legislation. The members, he said, should be prepared for licensing from both safety and measurement angles, and a model regulatory bill is ready for submission.

Mr. Karkus stressed the importance of unity in connection with legislation. He praised the Deputy Superintendent of Weights and Measures of the state for having been very helpful.

L. B. Pettit, of City Gas Co., a member of the board of directors, discussed the desirability of persuading those in the industry in the southern part of New Jersey to take a greater interest in the association's program. The possibility of holding meetings in the afternoon, with lunch before and dinner afterwards, instead of the present practice of a dinner followed by an evening meeting, was taken up.

One viewpoint was that the association in the long run did not need to worry about membership and attendance, since when legislation is passed there will be obvious advantages to becoming part of the association.

Harry Martin, of Newton, another member of the board of directors, discussing electric competition, urged



The administration building at Minnesota University Farm in St. Paul where the forenoon sessions of the Sept. 6-8 LP-Gas service school will be held. Afternoon sessions will be held in the agricultural engineering building.

those present to keep contacting every new building, and "get together and sell gas and keep selling bottled gas." He urged that each member get at least one new member.

Many others took an active part in the meeting, including Manny Gale, of Keyport Hardware Co., Keyport; and Guy Richdale, Sr., and Guy Richdale, Jr., of Guy Richdale, Somerville. State Senator Alfred B. Littell of Littell Gas Service, Franklin, was present with his son. Representatives of various manufacturers attended.

Edward A. Keible, of Northern Gas Co., Ledgewood, president of the association, and member of the board of directors of the national Liquefied Petroleum Gas Assn., presided.

## "U" of Minnesota Schedules Service School for Sept. 6-8

The University of Minnesota, in cooperation with LPGA and NBPA, will hold a short course on liquefied petroleum gas service on Sept. 6-8 at the University Farm, St. Paul.

Under the direction of C. H. Christopherson, professor of agricultural engineering in the university's department of agriculture, the course will include studies of LP-Gas characteristics, principles of combustion, venting of appliances, instructions to customers, selection of proper equipment, location of equipment and appliances on premises, state and national regulations, installation and servicing of appliances, fundamentals

of pressure controls, piping and connections, testing and adjustment, customer and employee relations. The Minnesota Petroleum Gas Assn. is working with the university and the two national associations in arrangements for the school, cost for which will be \$12, including bound copies of all lectures given. Dormitories accommodating 400 men will be available at a fee of \$2 per night.

Prof. Christopherson is being assisted in arrangements for the short course by a committee composed of Frank Carpenter, president, United

Petroleum Gas Co. (Minneapolis); Parker Anderson, division of agricultural extension, University Farm; Leonard Lund, state fire marshal's office, St. Paul; Prof. B. J. Robertson, University of Minnesota; John L. Locke, secretary, Minnesota Petroleum Gas Assn., St. Paul; and Elwin E. Hadlick, executive vice president, National Butane-Propane Assn., Minneapolis.

Invitations have been sent to LP-Gas companies in Minnesota, Wisconsin, Illinois, Iowa, Nebraska, North Dakota, South Dakota, and Montana.

## 18-Month Training School Will Graduate Gas Technicians

By ROBERT E. BORDEN

Director of Publicity and Advertising,  
Liquefied Petroleum Gas Association, Inc.,  
Chicago

ONE of the important needs of the LP-Gas industry—more trained technicians—will be supplied through the course in gas fuel technology to be offered for the first time this fall by Southern Technical Institute, a unit of Georgia Institute of Technology, at Chamblee, Ga. This streamlined, 18-month period of study, developed with the support and cooperation of the Liquefied Petroleum Gas Association, will be open to all graduates of accredited high schools. Classes begin Sept. 26.

Designed to prepare the student for entrance and advancement in the LP-Gas industry and other phases of the gas business, the new course will give him specific training in gas operations and broad technical and supervisory instruction. Shop work will develop his skill in the various tasks normally encountered in installation and service activities.

An advisory committee representing all branches of the LPGA will

function with the institute staff in shaping the course to fit the requirements of the LP-Gas industry. Heading this group is Fred A. Rives, Automatic Gas Co. of Columbus, Inc., Columbus, Ga.

Southern Technical Institute, formerly known as The Technical Institute, is a unit of Georgia Tech's engineering extension division. All of its courses are prescribed by the parent institution and are approved by the board of regents of the University System of Georgia. Lawrence V. Johnson is director of the school and John D. Sewell assistant director.

"The technician is the most needed person in modern industry," said Mr. Johnson in announcing the course in



L. V. JOHNSON



JOHN D. SEWELL

gas fuel technology. "Job opportunities for the college-trained technician appear to be very bright. Studies made by the American Association of Engineering Education reveal that 10 technicians are needed for every engineer. It is estimated by the Associated Industries of Georgia that in Georgia, alone, there are 20,000 well-paying positions open for trained technicians."

Mr. Johnson defined a technician as a person so trained in the basic engineering sciences that he can quickly adapt those principles to the machines and processes of modern industry. Not an expert mechanic, he is equipped to take the plans of an engineer and by the coordination of men, materials and machinery, produce the finished product or service.

Pointing out that the function of technicians in the LP-Gas or any other business, is to serve in technical and supervisory capacities, Mr. Johnson cited a recent survey which indicated that those who are properly trained can satisfactorily perform 90% of the duties and responsibilities currently assigned to professional engineers. In time, he said, many technicians advance to important engineering and executive posts.

"A large percentage of our high school graduates," asserted Mr. Johnson, "desire to enter the industrial

field, but have been unable to find an educational program suitable for their needs other than in the professional engineering schools. Many are unable or unwilling to spend the time and money required for engineering degrees and, therefore, go directly into industry ill prepared to take advantage of its opportunities."

The course in gas fuel technology, like other studies at Southern Technical Institute, is geared to the task of turning out technicians after 18 months of accelerated curricula. It will have the following purposes and characteristics:

#### Objectives of the Course

1. The course is designed to prepare individuals for technical positions, but its scope is more limited than that required for a career as a professional engineer.

2. Curricula are essentially technological in nature and are based on scientific principles. They require the use of mathematics beyond the high school level and emphasize rational processes rather than rules of practice.

3. Programs of instruction are briefer and more completely technical than professional curricula even though they are concerned with the same general fields of industry and engineering.

4. Training for artisanship is not included.

5. The course offers a terminal education—one that equips the graduate to step directly into a well-paying position without having to continue his formal education.

The estimated total cost for the 18-month gas fuel technology course, including matriculation, tuition and other fees, books, room, board and laundry, is approximately \$1800 for a Georgia resident and about \$2250 for a non-resident. Veterans of

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Plenty of families right in your own community are in the market for a quality floor furnace like this. Available in four popular sizes, the Saginaw is ideal for small homes with or without basements, stores and similar structures. Moreover, it is within reach of the smallest budget—both as to initial investment and operating cost. Factory assembled for easy installation. Complies with national safety requirements approved by American Gas Association. And, like other American-Standard products, the Saginaw can be sold for modernization on a convenient time payment plan. For details, contact your Wholesale Distributor. American Radiator & Standard Sanitary Corporation, P. O. Box 1226, Pittsburgh 30, Pa.



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World War II may enroll under the provision of the G.I. Bill of Rights which provides tuition, book and subsistence allowance.

Catalogs giving a complete description of the course may be obtained by writing to Southern Technical Institute, Chamblee, Ga.

## Second LP-Gas Short Course U. of Pittsburgh, Sept. 7-9

The second annual LPGA Eastern LP-Gas service school will be held again this year at the University of Pittsburgh, Pittsburgh, Pa. The decision to repeat the course is a direct result of the attested value of the one held last year. The dates are Sept. 7-9.

It is part of the overall plan of the educational committee of the LPGA to conduct similar schools periodically in various parts of the country.

K. R. D. Wolfe, Fisher Governor Co., is chairman of the educational committee and arrangements for the course have been under the direction of John Knox Smith, field engineer of the LPGA, and Alton Lutz, Protane Corp., Erie, Pa.



ALTON LUTZ

## Pamphlet 58 Adopted For Minnesota Operators

NFBU Pamphlet No. 58, with a few deletions and additions, has been submitted to the attorney general's office as operating rules for the state of Minnesota, according to John L. Locke, secretary of the Minnesota Petroleum Gas Assn.

## CALENDAR

All associations are invited to send in dates of their special and annual meetings for this calendar.

Aug. 15-17 — SAE National West Coast Meeting. Multnomah Hotel. Portland, Ore.

Aug. 29—Tennessee LP-Gas Assn. Andrew Jackson Hotel. Nashville.

Sept. 6-8 — Minnesota LP-Gas Service School. University of Minnesota Farm Campus. St. Paul.

Sept. 7-9—Second Annual LPGA Eastern LP-Gas Service School. University of Pittsburgh. Pittsburgh, Pa.

Sept. 7-9—Pacific Coast Gas Assn. Annual Convention. Santa Barbara, Calif.

Sept. 15-16—North Eastern District. Liquefied Petroleum Gas Assn. Hotel Statler. New York.

Sept. 19-20—National Butane-Propane Assn. Convention. Jefferson Hotel. St. Louis.

Sept. 25-27—Colorado LP-Gas Assn. Fall Convention. Shirley-Savoy Hotel. Denver.

Sept. 26—Opening of 18-month, LP-Gas Fuel Technology Course at Chamblee, Ga.

Sept. 28-29—LPGA Board of Directors. Cosmopolitan Hotel, Denver, Colo.

Sept. 29—Long Island (N. Y.) Liquid Petroleum Assn.

Oct. 10-11—Kentucky LP-Gas Assn. Annual convention. Seelbach Hotel, Louisville.

Oct. 14—NGAA Southern Regional Meeting. Blackstone Hotel. Tyler, Texas.

Oct. 17-20—American Gas Assn. Annual Convention. Chicago.

Oct. 31-Nov. 4—National Safety Congress. Morrison Hotel. Chicago.

Nov. 21-22—Assn. of Nebraska LP-Gas Dealers. Hotel Paxton, Omaha.

Nov. 27-Dec. 2 — American Society of Mechanical Engineers. Annual Meeting. New York.

1950

April 12-14—National Petroleum Assn. Hotel Cleveland. Cleveland, Ohio.

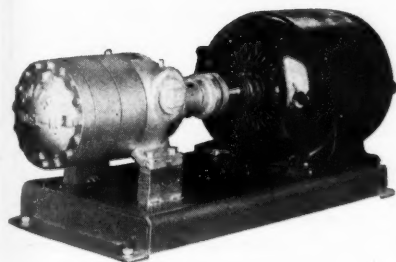
May 22-24—Gas Appliance Manufacturers Assn. Annual Meeting. The Greenbrier, White Sulphur Springs, W. Va.

Sept. 13-15—National Petroleum Assn. Hotel Traymore. Atlantic City, N. J.

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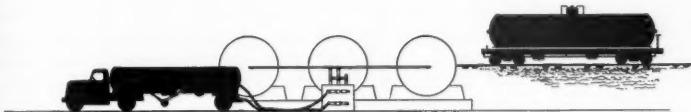
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**PUMPS**

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RATED TRANSFER CAPACITY 150 G. P. M.

AT 1800 R. P. M. SHAFT SPEED.



This pump is recommended only for very fast liquid transfer, and will deliver its rated output in such service if properly installed. Never use the MC-4 to fill small tanks or cylinders.

The piping system must be very carefully designed when the MC-4 pump is specified. Since the pump has a capacity greater than the standard 3" x 2" excess-flow valve, some other type of safety protection must be provided at the tank outlet. Sometimes two 3" x 2" valves are manifolded together.

A 7½ H.P. motor will drive the MC-4 pump against normal pressures (40 p.s.i. differential) encountered in fast transfer service, where vapor return lines are used. In unusual installations requiring higher pressures, a 10 H.P. motor may be specified.

Write for further information, prices, and installation suggestions.

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AUGUST — 1949

113



# The Farmer Has The Cash—

## Just Sell Him on the Fuel, Texas Dealers Told

**A**GGRESSIVE salesmanship is what is needed by the LP-Gas industry, according to delegates and speakers attending the fourth annual convention and trade show of the Texas Butane Dealers Assn. held in Dallas June 26-28. J. E. Walling, Jr., president, and W. J. "Bill" Lawson, executive secretary, guided the group's three day meeting which drew an attendance of over 500 members.

Frank A. Briggs, editorial director, Farm & Ranch, Dallas, sounded the keynote of the sales theme when he cited Federal Reserve figures to show the healthy financial position of the farmers of Texas and of the nation.

By CRAIG ESPY

"Cash bank deposits and savings bonds in the hands of farmers top 20 billion dollars," he related. "Butane dealers will have competition from farm machinery salesmen, electrical goods salesmen, household equipment and other lines," he pointed out. "Butane equipment should have preference," he said, "but this equipment and service will have to be sold."

A very important development coming out of the three-day meeting is the decision to develop an insurance survey in conjunction with the Texas



New officers of the Texas Butane Dealers Assn. (left to right): C. D. Ribble, vice president; Gus J. Moos, secretary-treasurer; W. R. McCright, president; Gene Bumpus, vice president; and Fred Greenwood, vice president.

### Texas Dealer Officers

President—W. R. McCright, Victoria.

Vice Presidents—C. D. Ribble, Paris; Fred H. Greenwood, Gainesville; Gene Bumpus, Plainview; Howard Bunch, San Angelo.

Secretary-Treasurer—Gus J. Moos, Austin.

Executive Secretary—William J. Lawson, Austin.

State Insurance Department. Dean Whiffen, director of General Liability Section, State Insurance Department of Texas, showed in an address before the group the urgent need for developing the survey.

"It will be a cooperative effort between the Texas Butane Dealers Assn., the insurance companies, the

insurance agents and the State Insurance Department," he said. Various types of accidents will be evaluated and experience records set up to establish a more appropriate set of classifications to properly describe the operations of the LPG industry. Similar surveys have been conducted by the soft drink bottling industry and by the oil industry. "It is impossible to promise you," said Mr. Whiffen, "that your rates for insurance coverage will be less following the survey, but you will be better satisfied when you can be assured of receiving proper value in terms of coverage for the premium dollar expended." Upon action taken by the new board of directors, the new president, W. R. McCright, will appoint a committee to work out the details of this survey.

The theme, "How to go about finding what it costs to do business," was developed by R. T. Curtis and Mar-



Officers and directors of the Texas Butane Dealers Assn. (front row, left to right): J. E. Walling, Jr., retiring president (director); Lyle Blanton; W. R. McCright, president; C. H. Lacey; Gus J. Moos, secretary-treasurer; E. K. Beanland; C. D. Ribble; Gene Bumpus; C. G. King; Bryan White. Back row (left to right): Howard Bunch; Fred Greenwood; H. H. Heffernan; U. C. Roney; Carl Clardy; J. D. Lowry, Jr.; A. O. Mallory; E. O. Brown, and R. E. Lee.

shall Massey, of Ross-Martin Co., Tulsa. Mr. Massey urged the dealers to have an objective as to the profits sought; put costs together as to nature and objects of expenditures; classify costs by function; establish cost limitations and to watch deviations from cost standards set. "By using tools available to you, you can tell where you are going," he declared.

"Giantism" and monopolistic tendencies of big business, were attacked by Ed Wimmer, vice president, National Association of Small Business, Inc., Chicago. "People must demand that Congress break all strangle holds on the American system of free enterprise," he declared. "It is decentralization or doom," he said as he urged the ending of giantism in business, finance, and in farm cooperatives and labor unions.

W. E. Bill Jameson, of the House of Representatives from El Paso county, addressed the group on the subject, "The Butane Dealers Stake in Legislation." Bascomb Giles, State Land Commissioner, brought an unscheduled message supporting state ownership of the tidelands.

Patrick D. Moreland, president, Texas Trade Assn. Executives, Austin, and Dr. R. E. Jackson, Denton, Texas, were luncheon speakers, and Clayton Rand, Gulfport, Miss., spoke at the annual banquet and dance.

#### Past Presidents Honored

All past presidents were honored at one of the luncheons, through the presentation to them of hand illuminated scrolls of appreciation. Those receiving the scrolls were Elmer L. Atkins, W. E. Fraley, Lyle Blanton, Gus J. Moos and J. E. Walling, Jr. Presentations were made by Ray Nob-

J. E. WALLING, Jr.



Retiring President

W. J. LAWSON



Executive Secretary

litt. W. R. McCright presided over the luncheon.

"Fraley's Butane Boys," radio musicians provided music at the president's reception and friendship hour held on the opening day.

J. E. Walling, Jr., presided over the meeting including one held for members only. Legislation supported by the association and that not supported was discussed at this meeting. Mr. Walling had previously discussed butane reserves and had mentioned the progress made by dealers to substitute larger tanks for smaller ones, thus providing more customer storage.

W. R. McCright, Modern Appliance Co., Victoria, was elected president, William J. Lawson was re-elected executive secretary, and Gus J. Moos, Hydro Gas Co., Austin, was elected secretary - treasurer. Mr. McCright; C. D. Ribble, Automatic Gas Co., Paris; Fred Greenwood, Greenwood & Co., Gainesville; Howard Bunch, Bunch-Reisen Co., San Angelo; and Gene Bumpus, Johnson & Bumpus, Plainview, were elected to the board of directors.

The following were elected district directors: L. D. Lowry Jr., Lowry



## The more sightly the equipment, the easier the system sells!



National 500-gallon tank



National 1000-gallon tank



ANY NATIONAL LP-Gas System dealer can tell you that it pays to talk tanks and spheres from the landscaper's angle. Stress the attractiveness of these good-looking steel containers in the yard and you'll be surprised to see how it helps sell the system.

But, of course, the biggest reason for handling NATIONAL LP-Gas Systems is their safety.

Made by the world's largest manufacturer of steel tubular products, they are built to withstand 200-pound working pressure—the highest required for any LP gases. They meet all of the requirements of the National Board of Fire Underwriters and bear the Underwriters' Laboratories, Inc., label.

NATIONAL LP-Gas Systems are available in three sizes — the 300-gallon sphere and the 500- and 1000-gallon tanks. All are 51 inches in diameter and come completely equipped with the necessary fittings, including regulator. They are tested at the plant for proper pressure and shipped ready for immediate installation. For details, write to National Tube Company, Frick Building, Pittsburgh 19, Pennsylvania.

NATIONAL TUBE COMPANY, PITTSBURGH, PA.

COLUMBIA STEEL COMPANY, SAN FRANCISCO, PACIFIC COAST DISTRIBUTORS

UNITED STATES STEEL EXPORT COMPANY, NEW YORK

# NATIONAL LP-GAS SYSTEMS

UNITED STATES STEEL

Hardware and Furniture Store, Mt. Vernon; C. C. Wright Jr., Liquilux Gas Services, Houston; J. W. Beasley, Service Butane Co., Boerne; U. C. Roney, Roney's Butane Co., Corsicana; Fred Greenwood, Greenwood & Co., Gainesville; C. G. King, King Appliance Co., Breckenridge; Carl Clardy, Western Appliance Co., Stanton; R. E. Lee, R. E. Lee Oil Co., Spearman. J. E. Walling Jr., Lyle Blanton, Gus Moos, George Link and C. D. Ribble were elected directors at large.

The "Texas Tank Fabricators" had a specially called meeting at the conference. Harry Leyda, General Steel Co., Fort Worth, was reelected chairman of the group, and Ray Wallace, Trinity Steel Co., Dallas, was reelected secretary-treasurer.

## Gas is the Popular Fuel In 64% of American Homes

According to figures from the Gas Appliance Manufacturers Assn., more than 1,690,000 new cooking customers were added to gas utility and LP-Gas distribution systems during 1948.

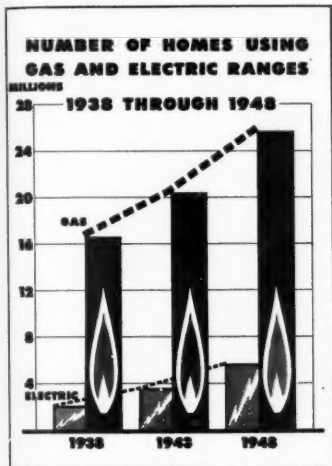
During the 10-year period from 1938 to 1948, 9,241,000 homes were added to the gas cooking list, a 56% increase. Homes using gas for cooking as of Dec. 31, 1948, numbered 25,776,000.

In contrast, during the past 10 years, 3,690,000 additional families purchased electric ranges, bringing the total number of electric cooking customers to 5,840,000.

Approximately 64% of all homes in the United States cook with either



New officers of the Missouri LP-Gas Assn. (left to right): Crump Taylor, Appleton City, president; A. H. Bauer, Versailles, vice president; C. A. Enos, Jr., St. Joseph, treasurer, and Robert W. Hadlick, Jefferson City, executive secretary.



pipled gas or with LP-Gas. Rural LP-Gas cooking customers total 4,700,000, according to GAMA statistics, and have increased more than 800% since 1938.

## Offers Plan to Stabilize LP-Gas Business

By BOB TUDOR

A plan to stabilize the liquefied petroleum gas business, with advantages to the producer, the distributor and the consumer, is offered in a booklet prepared and mailed recently by the Universal Petroleum Co. of Tulsa.

The plan, according to the management of Universal, was developed because of the "feast or famine" aspects of the LP-Gas industry, and offers a suggested solution to many of the problems that have plagued the producers, distributors and consumers. To simplify discussion on the subject, Universal calls their plan "Uniplan."

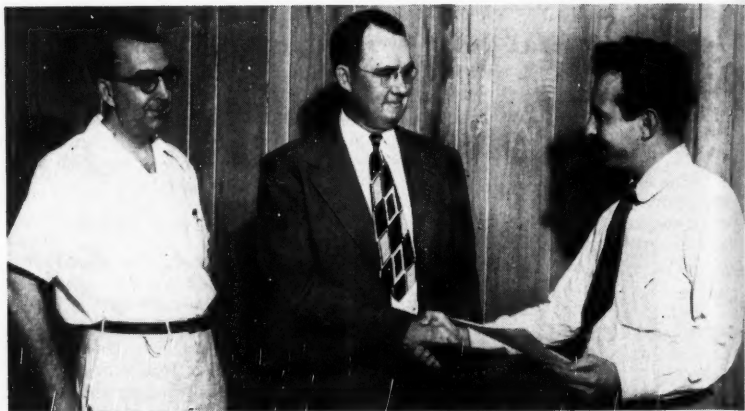
Under the present system of operation, the demand for butane-propane has been extremely seasonal, resulting in the cost varying between such seasons. Under Uniplan operation, a contractual cost for one year would be set so that both distributor and consumer would know in advance what his fuel costs would be.

### Better Delivery System

As now operated, the distributor must have an adequate fleet of trucks to be able to take care of the heavy demand for fuel after the arrival of the first cold weather. Under Uniplan, the consumer would provide adequate storage and the distributor would fill such storage approximately evenly over the year, eliminating to a great extent the many objections of delivering a large percentage of annual gallonage during the three or four coldest months. This would reduce his investment in transportation equipment and storage which today is a definite burden to all distributors because of their inability to utilize on a continuous basis, whereas, costs of operations are daily and not on just a winter month basis.

The consumer knows what his price per unit for butane-propane will be and since his storage is metered, he will pay monthly only for that portion of the fuel used. This will put the business on a monthly payment plan for the fuel used. This is standard practice for city dwellers to pay for their gas, water and electricity monthly.

Since the Uniplan of operation necessitates storage of a considerable volume of fuel by each consumer, a hardship could be placed on some distributors by having too large an amount of capital tied up in fuel at one time. For these, a plan of financing operations is also offered by Universal Petroleum Co. which may assist the distributor to finance his inventory of fuel. Such other advantages



Bound for Central America, M. Douglas McLean (right), graduate of National L-P Gas Institute, receives his certificate of graduation and merit from R. D. Lemonds, education director, as Earle A. Clifford, chief instructor, looks on.

as technical service and complete insurance coverage are included in the Uniplan operation. Uniplan is to be operated through a protected territory agreement between the supplier and the distributor.

In developing Uniplan, according to the management, Universal has attempted a solution to the many problems of the industry to assure a more stable business. Even should other producers in the industry not be prepared at this time to specifically adopt the Uniplan procedure, the booklet asks that each one attempt to work along similar lines to improve this growing industry.

Uniplan was first offered to the industry several months ago by Universal in an advertisement in BUTANE-PROPANE News. Requests for the booklet have been far in excess of expectations, coming in from all the 48 states which is proof of the interest aroused. Copies may be had by writing to Universal Petroleum Co., National Bank of Tulsa Bldg., Tulsa, Okla.

## LP-Gas Institute Graduate Gets South American Berth

M. Douglas McLean, of Los Angeles, was one of 40-odd men who completed training at National L-P Gas Institute, May 31. He left immediately for Managua, Nicaragua, C.A., where he will join the Ralph D. Moyer interests, Gas Popular, with headquarters in Managua and Guatemala City.

For the past three years Mr. McLean has engaged in the practice of private federal law and bankruptcy matters in Los Angeles. He is one of several men who have trained for service with this firm at National L-P Gas Institute during the past year. It will not be exactly like going to a strange country, for his wife is the granddaughter of a former president of Nicaragua, General Zavala, and her brother was the Nicaraguan minister to Japan prior to Pearl Harbor.

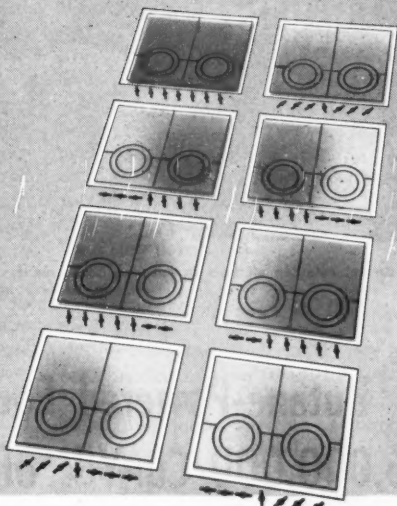


# ONLY GARLAND THE LEADER

*gives you top heat flexibility like this...*



**because only  
GARLAND**



**gives you FRONT-FIRED BURNERS**

Pictured here are only a few of the infinite Garland heat number of heat variations you can get from a Garland range.

Seven, burners and equipped for use with manufactured, natural or L-P gases. he wanted to cook top.

*THIS AD is part of the biggest advertising program in the commercial cooking equipment industry for gas-fired appliances. It appears this month in leading publications read by your customers.*

# GARLAND\* THE TREND IS TO GAS

Heavy Duty Ranges • Restaurant Ranges • Broilers • Deep Fat Fryers • Toasters  
Roasting Ovens • Griddles • Counter Griddles

PRODUCTS OF DETROIT-MICHIGAN STOVE CO., DETROIT 31, MICHIGAN

\*REG. U. S. PAT. OFF.



Shovel cuts top off hills to open up a new quarry. Lomita airport and Torrance oilfield in background.

## Butane-Powered Equipment Moves 16,000,000 Cu. Yds. of Earth in 17 Years

**C**LYDE Sheets was the first man to move a mountain with LP-Gas. He started 17 years ago, and has been at it ever since. As far as we have been able to find out, the Clyde L. Sheets Co. was also the first truck fleet operator to change from gasoline to "butane," back in the early days before there were any butane carburetors on the market.

The Sheets operation is a contract job getting out material in the "Dicalite" quarry, on the edge

of the Palos Verdes Hills near Lomita, Calif. It employs 5 power shovels, 18 dump trucks, 2 sprinkler trucks, and 2 bulldozers. With this equipment nearly 16,000,000 cubic yards of material have been moved.

"Dicalite" is the trade name for the diatomaceous earth processed and marketed by the Dicalite Division of the Great Lakes Carbon Corp. Diatomaceous earth is the skeletal remains of billions of microscopic marine algae called "dia-

# POWER

toms" which have the peculiar ability to extract silica (the basic ingredient of quartz) from the sea water, and form it into protective skins. As these single celled diatoms die, their remains fall to the bottom of the ocean. In the course of time the sea water dissolves out everything but the siliceous framework, and these porous, light weight skeletons accumulate in layers on the ocean floor, in some cases as much as 3000 feet in thickness.

Many of these great deposits dating back to the tertiary geologic age have been brought above sea level by the rising of the land. Commercial deposits occur from Los Angeles county northward through the coast range into Oregon. While the commercial deposits were created millions of years ago, the same process is going on continually, particularly in the colder oceans near the polar regions, where countless numbers of diatoms live and die.

## Product in Wide Demand

Due to its spongy structure, diatomaceous earth makes an excellent filter medium. It is used extensively in the refining of sugar, and for a number of other important applications in the production of vegetable oils and other foodstuffs.

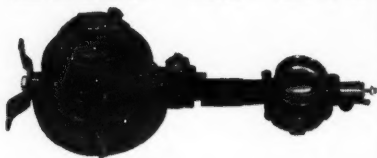
Its silica content and the very minute grain size make it excellent as a fine abrasive, for which it is used a great deal in manufacturing tooth paste, polishes for automobiles and metals, etc. Its cellular structure and high heat resistance give it excellent insulating qualities, particularly at temperatures above 1000° F, so it is in demand for insulating boilers, steam pipes, and various kilns which operate at high temperatures.

## First Conversion in 1932

The conversion of the Sheets operation to butane was begun in 1932, under the direction of its superintendent, J. M. (Shorty) Lyon. G. A. Holzapfel, a pioneer in butane power development, collaborated. At that time there were no special butane carburetors. Gasoline carburetors had to be adapted by drilling through at the butterfly and connecting tubes to the source of the gas. Pressure regulation, then as now, was accomplished by two diaphragm type pressure reducing valves in series, the first stepping the tank pressure down to about 18 pounds per square inch, and the second dropping it to atmospheric pressure.

Finding that it was necessary to apply heat to the fuel line, Mr. Lyons made his own heat exchang-

# This Is It!



## There "Ain't" No More

Notice the extreme simplicity of the DIX LP-Gas Carburetor. This compact unit—complete as shown—is faster and cheaper to install. Do it the "easy way" with a DIX.

*Export Office: 301 Clay St., San Francisco*

## DIX MANUFACTURING CO.

3447 E. Pico Blvd. Los Angeles, Calif.

## FOR BETTER CONVERSIONS



Make every conversion a better installation by using an Ellis Manifold designed especially for LP-Gas. Your customers will find they get more power and mileage . . . and you will get more customers.

*Ellis "Bu-Power" Manifolds have been tested and proven by hundreds of successful installations.*

## ELLIS MANIFOLD CO.

1708 S. Soto St. Los Angeles 23, Calif.

ers. These consisted of large external tubes through which the hot water circulated from the engine block to the radiator, and smaller internal tubes which carried the fuel. They were crude and bulky, but effective.

With the later development of complete LP-Gas carburetion and regulation systems, the early equipment was replaced with more efficient, specially designed units. The fleet is now standardized on "Al-gas" equipment.

The power shovels each have 2 cubic yard buckets. Four of the shovels are in active service, while one is held in reserve. Two of these shovels have been in service ever since the operation commenced. Four of the shovels are powered with Waukesha engines which were originally designed with very low compression ratios for regular grade gasoline of less than 60 octane number.

### Engines Have Natural Gas Heads

These engines were equipped at the time of the conversion with natural gas heads supplied by Waukesha, to take advantage of the higher octane value of LP-Gas. This also gives increased horsepower and thus permits faster operation.

As the operation is very dusty, it is necessary to equip all engines on the job with good air filters, and service these regularly, so no abrasive material will be drawn in through the carburetors and breathers. That these air cleaners have been able to do a good job in this extremely fine dust is

evidenced by the fact that the engines run from 18 to 24 months between rebores. After the third rebores the blocks are replaced. This still compares favorably with clean, highway operation.

Four trucks are ordinarily assigned to each shovel, making a total operating requirement of 16 of these in action and two in reserve. Present equipment consists of GMC and Diamond T trucks with 4 wheel drive. The GMC engines were high compressioned for LP-Gas operation by cutting down the cylinder blocks to get a ratio of 7:1. The Diamond T engines had compression ratios of 6.5:1 when purchased, and this was not changed.

Dump bodies on these trucks

have capacities of 9 and 10 cubic yards, level. As shown in the accompanying photographs, the loads are piled as high as they will carry. When working in the pure Dicalite, which is light in weight, the loads weigh between 6 and 7 tons. The diatomaceous deposit is overlaid with a thick layer of soil and gravel from an earlier streambed, which must be removed before the workable material is uncovered.

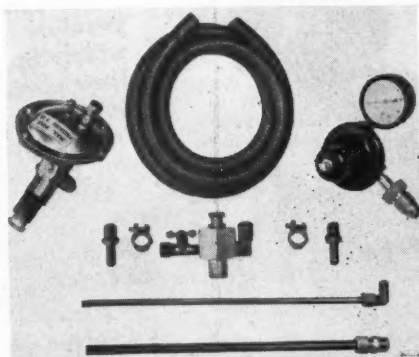
The overburden weighs over 12 tons per load. The light loads go down to a dump from which the material is conveyed to the mill for pulverizing and sacking, while the heavy loads nearly always go up hill to be dumped in the waste fills. These are in sites which have previously been excavated down to

## Low Cost Conversions

WITH NEW *Algas*  
VAPOR CARBURETION KIT  
for Farm Tractors  
and Small Stationary Engines

- This NEW type conversion operates on vapor drawn directly from bottle or tank.
- Can be used on engines up to 50 h.p. providing tank or cylinder is large enough to vaporize fuel under existing temperature conditions.

You'll be surprised at low price of this Kit . . . Write for information.



Shown is complete conversion unit. No other carburetion equipment is needed. Gasoline can still be used. (LPG unit spuds into regular gasoline carburetor.)

**There Is Algas Equipment for Every Engine**

**AMERICAN LIQUID GAS CORP.** 1109 S. Santa Fe, Los Angeles, Calif.

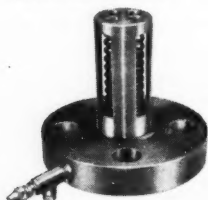
AUGUST — 1949

129

# CARELESSLY Tossed



The hydraulic operator which opens the valves.



Hydraulic Internal Safety Valves are installed inside the tank.



The tiny fusible plug shown above is installed at strategic points in the hydraulic line which actuates the Safety Valves.



A carelessly tossed cigarette or match, those two public enemies so often responsible for terrible forest fires, are quite as often responsible for fires and explosions when petroleum truck tanks are being unloaded.

The Shand & Jurs internal hydraulic valve system, the components of which are here illustrated, have been used by many marketers for years on gasoline trucks, and are now being widely applied to L.P.G. equipment. Their purpose is to instantly stop the flow of fuel automatically whenever fire accompanies unloading or a highway accident.

The little fusible plug, installed in tees in the hydraulic lines which actuate the internal safety valves, melts at 165°F. and automatically releases the hydraulic pressure, which closes all valves which may be discharging.

**SHAND & JURS CO.**

BERKELEY, CALIFORNIA

NEW YORK • CHICAGO • HOUSTON • LOS ANGELES • SEATTLE

**S H A N D & J U R S**

depths of from 100 to 135 feet.

As diatomaceous earth cannot be purified if it contains foreign materials, only the good, clean stuff can be milled and sold. There are layers of clay at various levels in the diatomaceous deposit, and these must be carefully scraped off and carried to the waste dumps.

Necessary auxiliary equipment includes two Allis-Chalmers, Model SO, crawler type bulldozers, which are kept busy making and maintaining roadways, removing clay strata, leveling quarry floors. Two water sprinkler trucks are also necessary, as the diatomaceous earth is so soft and fine that operation of the trucks over dry areas would quickly produce deep ruts and chuck holes filled with vast quantities of dry dust.

Keeping the roadways wet down

and leveled saves power and time, as well as wear and tear on the trucks. Keeping the dust down is a great factor of safety, for it prevents accidents arising from impaired vision, besides protecting the engines from breathing in the abrasive dust. This type of dust could also cause silicosis, a lung ailment due to breathing in silica material, which often leads to tubercular infection. For all of these reasons the expense of the two sprinkler trucks is considered a good investment.

Superintendent Lyon summarizes their experience with LP-Gas as follows: They originally changed to butane to cut the cost of fuel, for at that time the difference in cost was nearly 10 cents per gallon. They found that along with the reduction of fuel expense there was



Overburden of soil and river gravel must be removed before quarrying of diatomaceous earth can begin.





Taking out pure diatomaceous earth. Note how the material crumbles where the trucks have passed.

a very worthwhile saving of maintenance cost—pistons, rings, cylinders, bearings and journals lasted longer. Due to slightly higher combustion chamber temperatures, special attention was paid to valve tappet clearances, and spark plugs must be of a colder heat range than is required for the corresponding gasoline engines. With these precautions these units have shown satisfactory life.

With the present cost of LP-Gas the fuel saving is not as great as it was in former years, but the saving in cost of maintenance is just about the same as it has always been, and in a fleet of this size that is a matter of considerable importance.

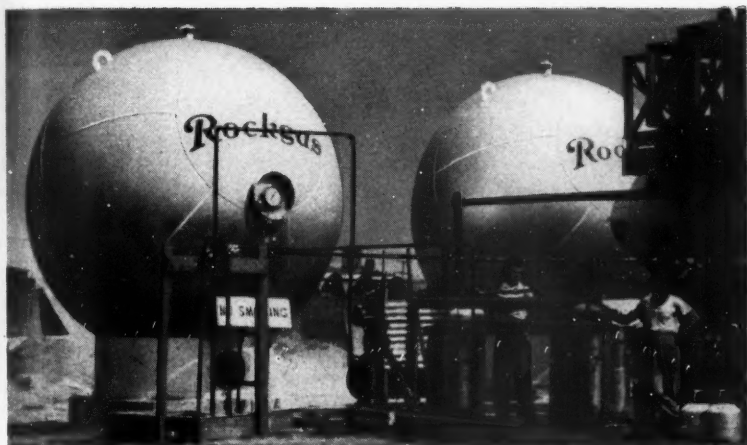
The Union Oil Co. has supplied the fuel and the lubricants for this fleet throughout the entire period of its operation.

## Simplified Engine Conversions Developed for Tractors

Production is well under way on newly designed equipment for converting gasoline-burning tractors to the use of propane. The new equipment, produced and marketed by General Tank & Steel Corp., of Roswell, N. M., has been used successfully through two harvesting seasons, according to O. L. Garretson, president of General Tank & Steel.

General Tank & Steel is marketing its new approach to an old LP-Gas industry problem in complete installation kits. Advantages including faster and simpler conversion, at a smaller cost, are claimed by Mr. Garretson.

The General Tank & Steel conversion method is built around making necessary connections to the original carburetor on the engine to be converted, rather than the use of a special carburetor. A standard ICC 60 or 100-lb. cylinder is used, and the standard mounting brackets have been designed



Manila, Philippines, 1949

## SUCCESS STORY from MANILA

### YOU CAN'T SHIP AIR FOR FREE!

Steamship rates are based on cubic displacement and air space hikes shipping costs sky high.

Superior Tank and Construction Company solved this problem in filling an order for two 5000-gallon Storage Spheres for Inter-Island Gas Service, Inc., Rock Gas distributors for the Imperial Gas Company in the Philippines.

The tanks were fabricated in hemispheres using a special design whereby the halves could be nested one atop the other with fittings and base secured in one space-saving unit. Final assembly was done in Manila.

**RESULT:** A 40% saving in shipping charges for Inter-Island and a re-order for two more tanks for Superior.

We like to tackle jobs that take ingenuity and "know-how." Let us figure your next job. We may save you money.

#### SPECIFICATIONS:

Tanks Are Identical.

Water Gallonage—5800 (each).

Diameter—138 in.

Height on Base—12 ft. 6 in.

Weight—12,000 lbs. (ea.)

Working Pressure—250 lbs. (API-ASME Code)

Fabricated of  $\frac{5}{8}$  in. thick A-212 Grade "B" Firebox steel plate.



### SUPERIOR TANK AND CONSTRUCTION CO.

6155 So. Eastern Ave.

Los Angeles 22, California



This picture shows the bracket for supporting a tank of propane, as designed for use on tractors.

for most tractors, so that the container can be bolted (usually on the front of a tractor) in place very quickly. All other equipment necessary for conversion may be mounted on the same bracket.

Necessary connections to the existing gasoline carburetor are said to be easily installed by following an instruction manual which accompanies each kit. Total elapsed time for the installation is two hours.

Mr. Garretson reports that the system provides for immediate change from LP-Gas to gasoline without adjustment but for the closing off of the valve on one fuel line and opening the valve that will supply the other fuel. There is said to be no change necessary in air cleaner connection, choke control, hand throttle control, governor control, or other modifications.

Choke performance is identical to

that of gasoline-powered engines, and characteristics of the system compare with specially carbureted LP-Gas engines in regard to starting, idling, economy, power, and ease of adjustment.

Mr. Garretson does not believe an increase in compression ratio to be necessary, but since such an increase has the same benefits as in other carburetion systems, the tractor owner might find it practical to have it done when other overhauling of the tractor is being accomplished.

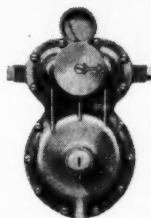
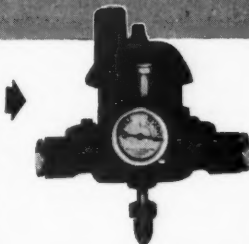
### Uses LP-Gas for Power

The accompanying picturesque photo taken atop a lonely hill in central California shows an oil well drilling rig in operation. Every piece of equipment on the outfit had to be trucked in over newly constructed roadways.

"Wildcatting" is the term used

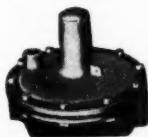
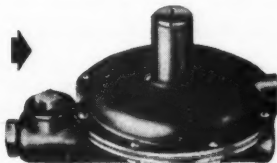
# RELIANCE gives you the REGULATOR designed for your needs !

**"MR"** is a single-stage multiple regulator which reduces high pressures to more efficient use by a secondary regulator. It will draw automatically on both cylinders when peak load is required, reverting to the service cylinder alone as the load decreases. This regulator is especially recommended for pilot light equipment and continuous burner service.



**"DBP"** is a two-stage regulator designed for duplex service. In the first regulation stage varying service cylinder pressures are reduced to 15 pounds; in the second stage this 15 pounds is reduced to a uniform 11 inches water column pressure at the outlet. When the service cylinder is empty, the reserve cylinder automatically cuts in, the indicator hand moving from service to reserve to indicate the cylinder in operation.

**"BKR"** is designed as a primary or secondary unit equipped with internal relief valve which can be set to relieve at pressures from 25 to 35 inches water column. Normal outlet pressure of 11" water column is maintained. The valve mechanism is easily accessible through the inspection plug.



**"BP"** is designed for smaller capacities than the "BKR." It is a convenient and economical regulator for the low-volume consumer, and provides precision control of outlet pressures.

## AMERICAN METERS

Write for Bulletin 40

## RELIANCE REGULATOR DIVISION

AMERICAN METER COMPANY  
INCORPORATED

1000 MERIDIAN AVENUE, ALHAMBRA, CALIFORNIA

when referring to new oil field locations and to experimental drilling in unknown areas. In such an operation the fuel as well as equipment and men are transported sometimes for many miles into back country seldom visited.

Butane-propane is an ideal fuel for such a purpose because it burns efficiently and economically and with the least engine maintenance. Enough fuel is stored on the location to last a week or more.

In this case, liquid fuel from the storage tanks is piped to the Ensign butane-propane vaporizer on the engine where it is converted to a dry gaseous fuel before it is mixed with air and distributed to the engine's cylinders for combustion. Butane-propane vapor burns clean and without oil dilution or noticeable carbon formation. This alone means a substantial saving in engine upkeep to say nothing of the tremendous saving in fuel expense and lubricating oil costs.

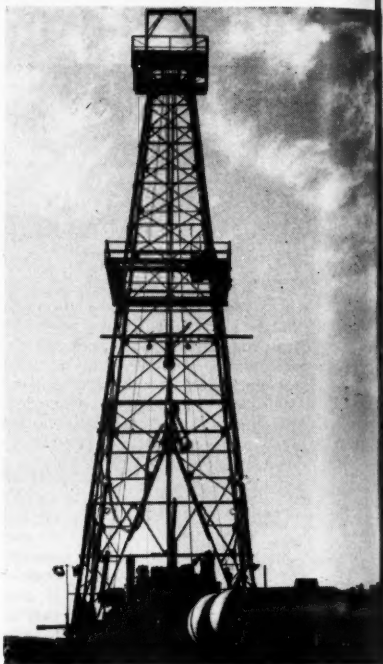
## Stanley Bell, Carburetion Engineer, Returns to Hughes

Stanley Bell, engineer for the last 4½ years for the American Liquid Gas Corp., Los Angeles, has recently returned to the Hughes Aircraft Co., Culver City, Calif. He was formerly with Hughes for 11 years and is now in the electronics department.

Mr. Bell is widely known in the LP-Gas industry, especially in connection with the special work which he performed in California and Texas covering the operation of gas engines converted to butane for use in irrigation pumping, tractors and trucks.

## Additional Storage for Ohio LP-Gas Dealer

With the opening of a new plant in Dover, Ohio, the Barnesville De-



This wildcat rig in California is powered by butane-propane gas. Fuel is stored in the three large Buehler LP-Gas plants. The engines are carburetted with Ensign vaporizers, filters and carburetors.

velopment Co., Barnesville, Ohio, has brought its total number of outlets to seven.

According to K. B. Colby, company manager, the Dover branch includes an 18,000-gal. bulk plant together with showroom, warehouse, and pump house and cylinder building. At the home office in Barnesville storage amounts to 36,000 gals. The branches located in other towns include stores and dealers.

Robert Lewis is president of the company which started in business in southeastern Ohio in 1926.

HAS BEEN UNDER LOCK AND KEY—

NOW IT'S READY FOR YOU TO SEE!



*lowest priced*

## BASE AND POST HOUSING

HERE IS THE KEY



TO LET YOU IN ON THE LATEST

FEATURES OF THE NEW STAMPINGS'

HOUSING . . . C-2-PB

### THE NEW C-2-PB



ALL OF STAMPINGS' experience in the design and manufacture of bottled gas housings has been concentrated in the development of the new C-2-PB. Now we offer you the price leader in a complete base, post and hood unit at the lowest cost we have ever achieved.

**NEW FEATURES:** The base is an asbestos cement combination that will last for years. Corrugated surface permits drainage. The steel post has a 3 coat baked enamel finish for extra durability. A cylinder locator on the post makes for faster servicing. The new double-action hinge has brass pin (will not rust) works very easily. This hinge also adjusts the hood automatically to proper height for various regulators.

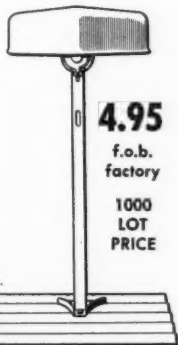
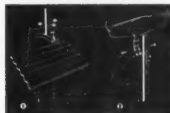
#### MODERN DESIGN



#### EASIER SERVICING



#### EASY TO INSTALL



**4.95**

f.o.b.  
factory

1000  
LOT  
PRICE



USE THIS KEY FOR  
MORE INFORMATION

STAMPINGS, INC., DAVENPORT, IOWA

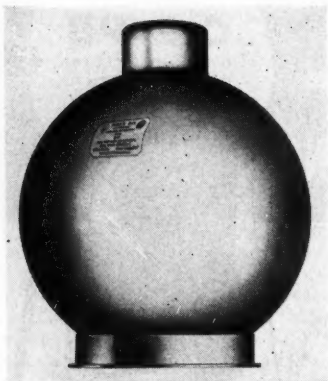
Gentlemen: Please send us complete details and pricing schedule on the new C-2-PB.

FIRM NAME .....

CITY .....

STATE .....

# PRODUCTS



## LP-Gas Systems

National Tube Co., P. O. Box 266,  
Pittsburgh, Pa.

**Description:** National Tube builds a 300-gal. sphere (illustrated herewith) and 500-gal. and 1000-gal. cylindrical tanks with hemispherical ends. Each tank is 51 in. in diameter.

The systems are completely equipped and ready to install. All fittings, including the regulator, are attached. Tanks are tested at the proper pressure after fittings are attached to insure tightness.

All National systems are made for 200-lb. working pressure, meet the requirements of the ASME code for unfired pressure vessels. In addition, they meet all requirements of the National Board of Fire Underwriters and bear the Underwriters' Laboratories, Inc., label.

The systems are constructed of steel which meets the specifications of the American Society for Testing Materials.

## Domestic Range

Detroit-Michigan Stove Co., Detroit, Mich.

**Model:** Custom Master Series of Detroit Jewel and Garland ranges.

**Description:** A new departure in design has been undertaken in this series of ranges designed by Carl Sundberg, industrial designer. Front lines are curved outward. Lamp assembly and time alarm are recessed into thick coved backguard.

Cooking top curves downward over the front and sides for a full two inches. Every corner is rounded—even inside the oven.







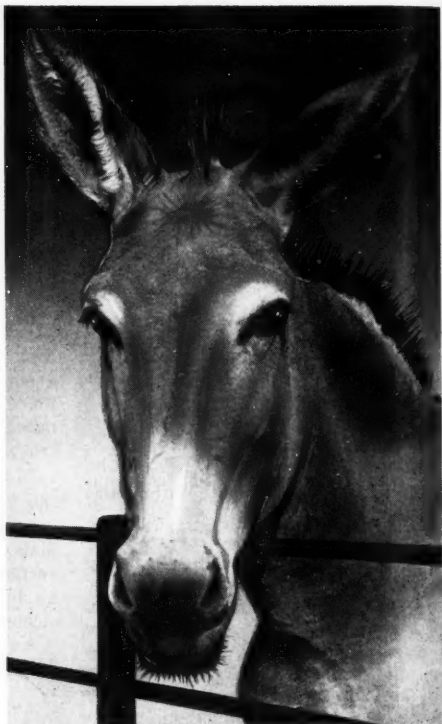
# Wantá be shown ?

Deal direct — when you buy L-P Gas from Sid Richardson Gasoline Co. you are assured of getting—

- ① *A product we make.*
- ② *From a plant we own.*
- ③ *In tank cars we control.*

As an independent producer, not in competition with our customers—we're interested in serving you well—keeping you competitive—saving you money.

If, like the Missourian, you want to be shown—we are ready to prove it to you through actual performance.



***Sid Richardson***  
GASOLINE CO.

629 FORT WORTH CLUB BUILDING • FORT WORTH, TEXAS

period. Clock mechanism automatically returns heating system to preselected day temperature each morning.

The thermostat has a stainless metal cover mounted on an ivory plastic base. It extends 1½ in. from the wall. It is available as a single unit or within a packaged set of a complete automatic control system.



### Domestic Range

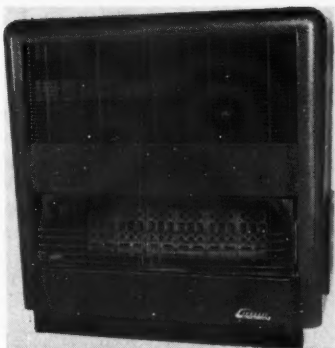
Geo. D. Roper Corp., Rockford, Ill.

Model: No. 49-3804-F.

**Description:** This is Roper's new "CP-LP" model, the first Roper built for LP-Gas with "CP" standards.

This unit offers automatic lighting of top burners, broiler and oven, plus staggered cooking top; simmer-speed top burners; large 3-in-1 oven; broiler; and giant "store-all."

The oven has been deepened one inch, permitting use of the largest savory roasters made for domestic use. Fluorescent lighting has been added. Vents have been counter-sunk in the back rail, adding to the streamlined appearance of the range.



### Circulator Heater

Folsom Co., 3104 Oak Lane, Dallas, Texas.

Model: Cirklair Vented Circulator.

**Description:** The design of this heater is new and includes some special features, among which is a fire-glass enclosed combustion chamber. In addition to the vent, this new model has lighter pilot as standard equipment.

Full automatic safety pilot and temperature control are optional equipment. It is fully approved by AGA for all gases.

### Combination Range-Heater

Caloric Stove Corp., Widener Bldg., Philadelphia, Pa.

Model: Bungalow Range.

**Description:** The range is equipped with all standard Caloric features, including dual burners, automatic oven heat control, broiler, hold-heat oven. Included also is the seamless porcelain one-piece top and a rigid porcelain one-piece front frame.

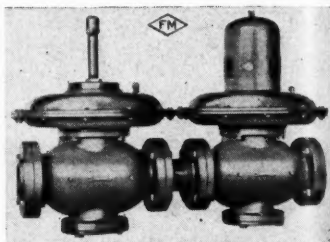
The heater burner is specially engineered for gas and is guaranteed for

life. It is not a convertible unit. Fins aid warm air circulation as well as exerting a cooling action on the burner itself.

The heating section, baffles and auxiliary heat exchanger are heavy gauge porcelain enameled steel and are coupled to give added flue travel and a "scrubbing" action to products of combustion, thereby promoting greater heating efficiency.

A positive 100% shutoff valve, for all gases, is provided. Room tempera-

ture automatically the gas supply in case of failure of either the gas or air pressure. Safety valves are built to



handle gas pressures up to 1 lb. and air pressures from 3 in. to 1½ lbs.

**Description:** In case of cut-off, no matter what the cause, the unit must be opened manually and then will not stay open unless both the gas and air pressures are back to normal.

The standard dual lock valve assembly consists of an automatic "Kam-Lock" gas shutoff valve, an air-operated gas cut-off valve; nipple between valves; two male-female unions on the three smaller sizes and companion flanges on the three larger sizes.



ture is controlled as desired with automatic thermostat controls. This AGA-approved unit develops 25,000 Btu input with LP-Gas.

### Safety Valves

Eclipse Fuel Engineering Co., Rockford, Ill.

Model: McKee Dual-Lock Safety Valves.

**Application:** Designed for use on air blast gas firing systems to cut off

### Domestic Range

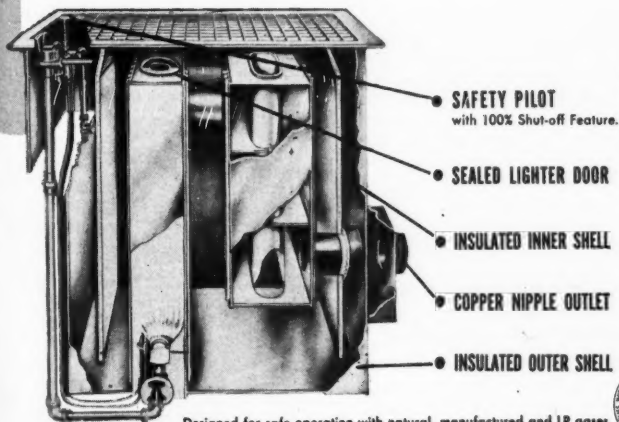
Norge Division, Borg-Warner Corp., Detroit, Mich.

Model: N-208.

**Description:** This range has four surface burners of the non-clog type with die-cast aluminum caps. Top grates and burner shield are finished in black porcelain enamel.

The porcelain-lined oven is 14½ in. high, 16 in. wide, and 18½ in. deep. Rack guides are pressed into the one-piece oven liner. Safety oven lighter

# Yes Sir...the New Ward Furnace has outstanding Safety Features...



Designed for safe operation with natural, manufactured and LP gases.



**and don't forget** these added sales and service features:

- ★ BILT-IN THERMO CONTROL.
- ★ STAINLESS STEEL COMBUSTION CHAMBER with 44% more heating surface.
- ★ SHALLOW CONSTRUCTION.
- ★ CONTROLS SERVICEABLE from floor level.
- ★ 20 YEAR GUARANTEE against burning out or rusting out.

**WARD**  
FLOOR FURNACES

Write for 32-page Brochure • WARD HEATER CO. • 1800 W. Washington Blvd. • Los Angeles 7, Calif.



and oven heat control with self-contained burner valve assure even heat at selected temperatures.

The porcelain-enamel broiler pan with gravy well may be used in five different positions. Controls for surface burners and oven are grouped on an easy-to-reach panel.

### Spark Plug Adapter

Electro Products Laboratories, 549 W. Randolph St., Chicago.

Model: Electro Spark Adapter.

**Applicatoin:** Makes it possible to run dynamic pressure tests without interrupting the firing of a single cylinder.

**Description:** An engine pick-up for pressuregraph testing, the spark plug adapter employs a standard brand



spark plug as an integral part. It is easily inserted into the cylinder head and operates in diesels, aviation fuel test engines, 2-cycle engines, or any other engine using spark combustion.

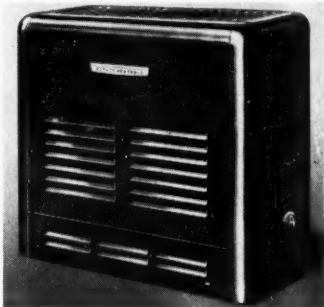
The Electro spark adapter engine pick-up comes in either 14 or 18 mm sizes. Both the spark plug and diaphragm employed in the pick-up are replaceable. Efficiency in running pressuregraph tests is increased and the need for special handling of motor blocks is eliminated.

### Gas Heater

Estate Stove Co., Hamilton, Ohio.

Model: Lo-Boy Gas Heatrola.

**Description:** This new line of gas heaters is available in two sizes: 40,000



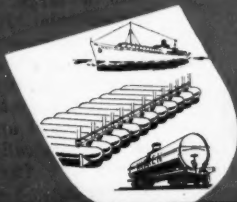
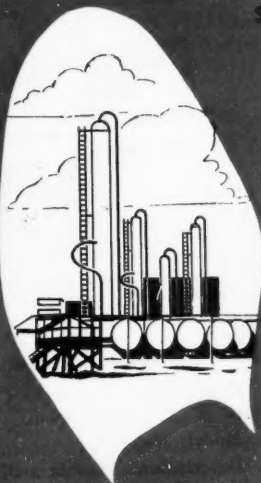
and 60,000 Btu. Heaters are of simple, functional design, harmonizing with any scheme of furnishings and are finished in pebbled, iridescent brown.

The "Intensi-Fire" combustion chamber consists of multiple heat exchangers which greatly lengthen the heat travel and offer extra radiation surface. The burner has slotted gas ports, providing secondary air supply.

# FIRST STEP IN LP-Gas BUYING

Select a SUPPLIER you KNOW  
has ALL of the FACILITIES  
necessary to fill your normal or  
emergency needs PROMPTLY.

Its expanded PRODUCTION,  
Adequate TRANSPORTA-  
TION, and Ample STOR-  
AGE let WARREN offer  
you that DEPENDABLE  
SERVICE.



#### DISTRICT OFFICES:

FORT WORTH  
HOUSTON  
MIDLAND, TEXAS  
DETROIT, MOBILE  
NEWARK  
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MADISON, WIS.

# WARREN

PETROLEUM CORPORATION  
TULSA, OKLAHOMA



## Carburetor

Ensign Carburetor Co., 7010 S. Alameda St., Huntington Park, Calif.

Model: Ensign "Dg".

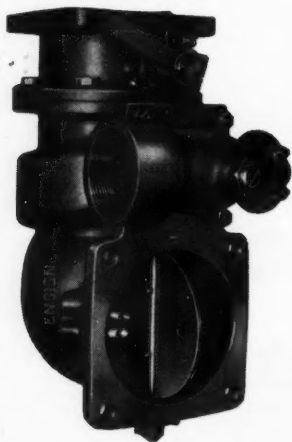
Application: For engines from 200 to 450 hp.

Description: New requirements in both the petroleum and transportation industries call for larger and more powerful engines—hence larger and more compact carburetors.

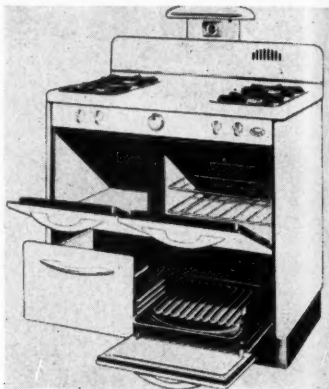
The Ensign model "Dg," a new carburetor for natural gas and butane-propane was laid out in sizes ranging from 2½" to 4" to handle engines up to 500 hp.

Outstanding features of the new "Dg" are:

1. Built-in fixed orifice economizer for part throttle operation.
2. Instant starting, utilizing separate set of gas-air orifices.
3. Provisions for balancing air-fuel ratios against air entrance losses.
4. Interchangeable venturi for easy adaptation of carburetor to meet wide range of engine operating conditions.
5. Universal in application. Up-



draft or downdraft, air-horn, throttle tube and entire carburetor movable radially on 90° centers. Throttle levers and stops may be used on either side.



## Domestic Range

Grand Home Appliance Co., 2323 E. 67th St., Cleveland, Ohio.

Model: No. 349.

Description: This is a 37-in. range with a large, thermostatically controlled oven. It has a drop-drawer, pull-out type broiler. A spacious and convenient storage compartment and a utensil drawer are provided.

It has a divided cooking top with two standard and two giant burners, all automatically lighted. Lamp and timer are furnished as standard equipment.

## Heating Equipment "Selector"

A slide rule device has been produced by the Surface Combustion Corp., Toledo, Ohio, for the purpose of selecting "Janitrol" gas heating equipment simply and rapidly. The

slide rule has been designed especially for the LP-Gas heating equipment dealer who does not have an engineering staff.

The only information necessary to operate the rule is the volume of a house in cubic feet and the local design temperature arrangements. The slide rule then automatically gives the specification size of the equipment required to heat the house. The selector applies to Janitrol equipment only. It is available to all Janitrol distributors.

### Boiler Catalog

Illustrated catalog No. 542 from the National Radiator Co., Johnstown, Pa., presents many useful facts relative to the sale and installation of the company's new "22" Series National gas boiler. The information is offered in a 4-page brochure, available from the company.

Both full and cut-away views of the new gas boiler are shown. Uses are given for these boilers, available in six sizes, with hot water or steam heating systems and for heavy duty commercial or industrial water heating.

Complete roughing-in dimensions are shown in addition to tables of boiler ratings and other data for butane and propane gases, butane-air, propane-air, manufactured, mixed, and natural gases.

### Water Heater Catalog

A catalog describing its complete line of automatic gas water heaters has been published by the Coleman Co., Inc., Wichita, Kan.

The 8-page, color brochure describes a new type burner of gray cast iron construction with a continuous slotted circular port that is

precision-machine surfaced for efficient performance and low-cost operation.

The Coleman line offers a model for every size family and the catalog, available by writing the company, gives specifications of 20, 30, and 45 gal. sizes.

### Estate Catalog

Stressing "departmentalized" cooking, Estate Stove Co., Hamilton, Ohio, has issued a 32-page catalog presenting its 4900 Series of ranges.

The catalog is directed to both the consumer and the dealer. The first portion describes the four cooking categories: Area No. 1, the "Bar-B-Kewer" for barbecuing, broiling and toasting; Area No. 2, the air-flow oven for baking and roasting; Area No. 3, the "Hide-Away Grid-All" for grilling, griddle baking and broiling; and Area No. 4, top burners for pan frying, deep fat frying, braising, and simmering.

Detailed description and specifications of ten Estate ranges are given together with illustrations of several simple installation and servicing features.

### Selwyn-Landers Bulletin

A new bulletin just off the press features Selwyn-Landers new POL valves which gives complete catalog information on sizes, capacities, etc. Selwyn-Landers' new service and cylinder valves are for use with domestic systems, ICC cylinders and motor fuel tanks.

Sectional views, over-all dimensions and other details are given. Address the company at 4709 E. Washington Blvd., Los Angeles.

## Phillips Bulletins

Several interesting bulletins have been issued by Phillips Petroleum Co. describing utility use of liquefied petroleum gases.

Bulletin No. 172, "How Your Gas Utility Can Use Phillips Liquefied Petroleum Gases," outlines the contents of the other six bulletins. The others include:

No. 173—Replacing Manufactured Gas With Propane-Air or Installation of New Propane-Air Facilities.

No. 174—New Undiluted Propane Service to Smaller Towns.

No. 175—Increased Gas Sendout Using Present Facilities.

No. 176—Enrichment of Manufactured Gas.

No. 177—Emergency Standby Facilities for Manufactured or Natural Gas Utilities.

No. 178—Underfiring Coke Ovens.

Copies of the above bulletins may be obtained by writing to the industrial section of the retail division, Phillips Petroleum Co., Bartlesville, Okla.

## Regulator Bulletin

A new bulletin, No. 1044, describing the complete line of Crawford pressure regulators, has been issued by Pittsburgh Equitable Meter Div., Rockwell Manufacturing Co.

All details of Crawford regulator construction and application are shown in sectional views. These include: standard outlet pressure control from a maximum of 5 psi inlet to inches of water; zero outlet pressure control; back pressure control. Additional uses, such as a pressure relief valve, non-return valve, and flow controller for maintaining constant flow rates regardless of pressure changes, are also described.

Typical performance curves are re-

produced to help guide in the selection of size and type. Complete tabular specifications, prices and weights for all sizes, from  $\frac{3}{4}$  in. through 6 in., are included.

Bulletin is available from the above company at 400 N. Lexington Ave., Pittsburgh, Pa.

## Fittings Buyer's Guide

The 1949 "Buyer's Guide" has been issued by the Midland Parts & Bearings Co. and is available through the Irving, Kan., office or by writing to 1418 Grand Ave., Kansas City, Mo.

This pocket-size guide covers the company's brass fittings, copper tubing, valves and cocks, orifices and kits, and specialty items for LP-Gas, city gas, oil burners, and plumbing and heating equipment. It also covers solder-joining and flared copper water tube fittings.

## Coleman Furnace Catalog

A new 15-page catalog describing Coleman automatic gas floor furnaces has just been released by the Coleman Co., Wichita, Kan.

Particular emphasis is placed on the new Coleman "Shalloflow" floor furnace which is only 22 $\frac{1}{4}$ -in. deep and requires no pit or excavation.

Another new feature described is a U-type gas control valve together with a time modulating thermostat.

## Buehler Brochure

The Buehler Tank and Welding Works, 5000 Pacific Blvd., Los Angeles 11, has just completed a new 4-color brochure covering their complete line of products, including both aboveground and underground LP-Gas plants.

This new literature contains complete specifications, dimensions, etc. It is available upon request.

# EVERYBODY CLAIMS "MORE VALUE" Dearborn PROVES IT!



**Any way you want to compare them, Dearborn Gas Heaters will meet all comers for the "Most Value" title...**

Dearborn, nationally advertised in the publications that count, gives you a consumer market ready and waiting for Dearborn Space Heaters — PLUS...

the **SAFETY** value of the Unitrol controlled heat —

the **BEAUTY** value of matchless heater design and finish —

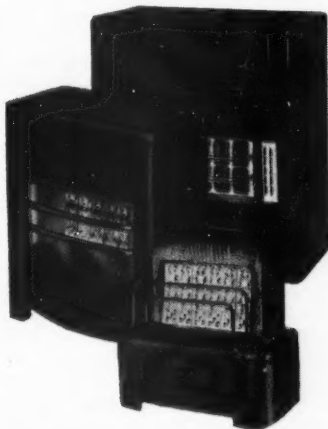
the **PERFORMANCE** value of scientific heater engineering —

the **CONVENIENCE** value of once a year lighting (Blue Flame Pilot) —

the **COMFORT** value of perfected circulating heat —

That's why no other heater can give you the profit Dearborn gives! Check the famous Dearborn line

*and the profit potential its extra value means to you. Write today for complete illustrated information. No other heater has ever swept the nation as Dearborn has—don't miss your share of Dearborn Dollars:*



## Dearborn STOVE COMPANY

Factories: Chicago • Dallas

General Offices: 1700 W. Commerce St. Dallas, Texas

Sales and warehouse offices in Los Angeles, San Francisco, Denver, Omaha, Kansas City, Oklahoma City, New Orleans, Houston, Memphis, Tampa, Phoenix, Columbus, Ohio, Lubbock, Texas

## THE TRADE



**H. W. TOWNSEND**

Harry W. Townsend, vice president of **Pacific Gas Corp.**, has been elected president by the firm's directors.

Mr. Townsend has been associated with the oil and gas industry since 1919 as a sales and marketing executive. As president of Pacific Gas Corp., he will direct the firm's engineering, construction and marketing activities in the liquefied petroleum gas field in the United States and foreign countries.

Main offices of the company are at 630 5 Ave., New York City, with branches in Chicago; Fall River, Mass.; Houston, and San Francisco.

John C. Pankow, director of sales, **Detroit - Michigan Stove Co.**, has announced the following additions to the Company's sales organization:

S. B. Lewis will represent the company in Detroit.

W. T. Clapp and Lloyd Gibbs will assist in the Central Division under Paul Inskeep.

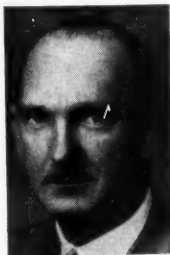
J. H. Carter, M. S. Heggen and N. H. Davis, Jr., will contact dealers in the Northwestern Division, headed by R. M. Houdek.

B. H. Giaretta, divisional sales manager, Northern Division, will be assisted by J. H. Coon and A. P. Ernst.

W. D. Webb has been added to

the Southeastern Division staff which is in charge of F. F. Hamilton.

C. W. Simpson and H. B. Newell will service customers in the Southwestern Division, directed by John M. Storm, Jr.



**JOHN KJERNER**

Appointment of John C. Kjerner as manager of the eastern sales district of **Warren Petroleum Corp.**'s liquefied petroleum gas division with headquarters at Newark, N. J., has been announced by G. L. Brennan, general manager. He succeeds C. L. Hulswitt, resigned.

Mr. Kjerner joined the Warren organization recently after four years of sales and plant installation experience with American Gas Conversion's, Inc., with which he became affiliated following his discharge as a U. S. Marine Corps flier after 3½ years of service in World War II.

Four transfers in the Texas sales personnel of Warren Petroleum Corp.'s liquefied petroleum gas division also have been announced.

Ed Voice has been transferred from the managership of the Midland, Texas, district office to Tulsa, replacing Jack T. Bradley, who was recently named sales manager of a new district office at Madison, Wis.

Richard Brewer, formerly in the

Houston LP-Gas office, has been assigned to the managership of the Midland office.

John F. Donovan has been transferred from the Tulsa headquarters to Houston to succeed Mr. Brewer.

T. C. Birch, formerly in the traffic department of the corporation's Tulsa office, has been transferred temporarily to the sales staff at Houston.



R. P. CONNETTE

R. P. Connette has been appointed assistant to the president of the American Car and Foundry Co., with headquarters in New York.

Born in New York City, Mr. Connette attended the schools of Lynbrook

New York. A graduate of Harvard, he also received the degree of L.L.B. from the University of Virginia Law School in 1941. He joined the public relations department staff of ACF in October 1945.

Francis P. McAneny, a member of the sales force of the American Radiator & Standard Sanitary Corp.'s Milwaukee branch house, was promoted to branch manager, according to an announcement made by Robert W. Lang, vice president and general manager of branches, at the company's Pittsburgh headquarters.

Mr. McAneny succeeds M. V. Osterhout, who was appointed supervisor of the newly created South Central division. He will make his headquarters in Cincinnati. Mr. McAneny has been associated with the Milwaukee activities of American-

Standard and its predecessor companies since 1919, and is widely known in heating and plumbing circles.

Darvin O. Rouzer, a member of the sales force of American-Standard's branch house in Altoona, has been promoted to manager of the new branch house at Parkersburg, W. Va.

Wallace F. Hastie, assistant manager of the Chicago sales office of the American-Standard has been named manager of the San Francisco sales office, according to an announcement by D. D. Couch, vice president and general manager of sales.

Mr. Hastie began his career with American-Standard after graduation from Rhode Island State College in 1938, where he studied business administration.

Charles P. Connally, Jr., the newly appointed Western division sales manager of Florence Stove Co., Gard-



C. P. CONNALLY, JR.

ner, Mass., opened the company's new Western division sales headquarters office and showroom on the fourth floor of the Western Merchandise Mart, San Francisco, with the opening of summer market week on Aug. 1. In the new showroom a complete

display of Florence gas, electric and oil ranges, combination ranges, and gas and oil heaters will be permanently maintained.

With the opening of this new sales division, Florence Stove Co. is completing the nation-wide distribution plan in effect before the war, until



**A CONTRACT SOURCE OF  
SUPPLY WILL KEEP YOU  
FROM GETTING BEHIND  
THE 8 BALL!**

Are you buying your fuel on a "spot" or "day to day" basis? Are you undecided as to your source of fuel supply? Let us explain the advantages of buying from Athens. We offer a truly dependable service and assistance to our customers. Our experienced personnel stands ready to assist you with any operating problems.

**Contact Us Before  
You Decide.**

**Athens**  
**PETROLEUM CORP.**  
McBirney Bldg. Phone 3-7133  
Tulsa, Okla.

curtailment of production made it necessary to serve the Western trade directly from one of the three factories located in Gardner, Mass.; Lewisburg, Tenn., and Kankakee, Ill.

Mr. Connally will direct Florence sales activities throughout the entire 11 Western states from the new division headquarters at the Mart in San Francisco. He is well qualified for his new responsibilities, having served until recently as Florence merchandise supervisor at the company's Southern division office in Atlanta, Ga.

Appointment of Dr. G. M. Marino, authority on Latin American trade problems, to take charge of the organization, distribution and marketing of Oronite chemical products in Latin America is announced by M. L. Baker, marketing vice president of Oronite Chemical Co.

Dr. Marino, until recently counselor for the Latin American Consular Assn. of San Francisco, will make his headquarters in San Francisco.



**C. W. MIRRIAM, JR.**

**Caloric Stove Corp.** has named Charles W. Merriam, Jr., as a sales representative in eastern and southeastern Massachusetts, to augment the New England representation of Roger G. Stillman.

Julius Klein, Caloric vice president and sales director, says that Mr. Merriam's territory covers the counties of Essex, Suffolk, Norfolk, Plymouth, Bristol,





**NOW!**  
get

**BEMCO**  
cylinders

at this **RECORD-BREAKING**  
**NEW, LOW PRICE**

**\$10<sup>95</sup>\***

Before you buy any LP cylinder, investigate the Bemco 4B-240 and 4BA-240! Engineered and manufactured to conform strictly with ICC specifications, these two cylinders meet the most rigid demands of the trade. Their remarkably light weight (4B-240, 69 lbs. approx.; 4BA-240, 91 lbs. approx.) means greater ease of handling, less employee fatigue. The special "rolled seam" construction of Bemco tanks makes them safe and sound for many years of service. Get the most out of your equipment dollars... get Bemco... the cylinder that offers you the best value at the least cost! Bemco will be your most contented...

lower cost  
longer service  
lighter weight

### PRICE LIST...propane tanks

QUANTITY	4B-240 100 Lbs. Cap. Approx. Weight 91 Lbs.	4BA-240 100 Lbs. Cap. Approx. Weight 69 Lbs.	ICC 4B-240 60 Lbs. Cap. Approx. Weight 61 Lbs.
	PRICE	PRICE	PRICE
1—99.....	\$12.45 ea	\$12.95	\$10.45
100—299.....	11.95 ea	12.45	9.45
300—499.....	11.55 ea	12.05	9.05
500—799.....	11.35 ea	11.85	8.85
800—999.....	11.15 ea	11.65	8.65
1000 or more.....	10.95 ea	11.45	8.45

Above prices include insertion of customer's valve, or will furnish at manufacturer's cost. Caps 50c additional, each.

Quantity Discounts Shown Prevail On All Orders Received Over A Period Of 12 Months.



**BERKLEY** Manufacturing Company

Sales Offices: 16909 LIVERNOIS AVE.

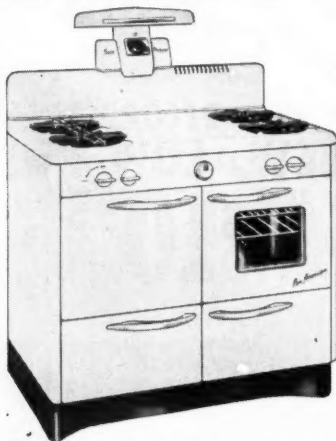
Detroit 21, Michigan

Some Sales Territories Open • Write for Information



Are YOU looking  
for a line of  
**RANGES**  
that are ...

**QUALITY BUILT WITH "EXTRA FEATURES"**  
**BACKED BY POWERFUL NATIONAL ADVERTISING**  
**PRICED FOR TODAY'S BUDGET-BUYER?**



Your answer is the line of ranges built by Dorch under such famous names as Royal and Pan-American. Write today for additional information on Dorch-built gas, oil, coal and wood models. You'll discover ranges with streamlined styling ... replete with "Extra Features" usually found only in high-priced stoves ... yet priced to enable you to sell for less while maintaining a good margin of profit.

As Advertised in the  
**SATURDAY EVENING POST**

**DORTCH STOVE WORKS**

INCORPORATED  
FRANKLIN, TENNESSEE

Barnstable, Dukes, and Nantucket.

A new constant pilot which saves gas and virtually eliminates pilot heat is one of the advanced features built into Ultramatic Caloric "CP" gas ranges now in production.

The heat generated by a constant pilot, low as it has been, is now reduced so sharply that the new pilot for oven and broiler has only 40% of the Btu input of the usual pilots on "CP" ranges. The results: more economy in gas consumption and cooler kitchens.

George L. Meyer, Jr., a vice president of Stewart-Warner Corp. since 1941 and an employee since 1907, has been elected to the board of directors. This was announced by James S. Knowlson, president and board chairman, who said that Mr. Meyer's election fills the board vacancy created by the death on May 3 of Ralph M. Shaw.



**H. W. MILNER**

Mr. Meyer, a native of Chicago, began with Stewart-Warner as an office boy and messenger. He was made head of the Stewart Die Casting division of the corporation in 1939 subsequent to several years as director of purchasing.

Appointment of H. W. Milner as sales manager of all gas-burning domestic heating equipment produced by the South Wind division of Stewart-Warner has been announced by W. E. Judd, general sales manager of the division. Mr. Milner will direct all sales, distribution and pro-

# It's the WAY they're Built... that counts!

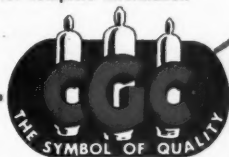


## ADVANCED PRODUCTION METHODS AND SPECIAL HIGH STRENGTH STEEL COMBINE TO MAKE THE CGC 64 LB. CYLINDER OUTSTANDING

You save money when you use the CGC 64 lb. cylinder. These rugged cylinders are the lightest in the industry... that means more cylinders per load, fewer dollars and cents in shipping charges. It means lower upkeep costs on trucks, too, because of so much less wear and tear. It also means your drivers will find them the easiest and fastest to handle, and you know what that means.

But light weight isn't everything... the way they're built is what counts. Well, by the use of special high strength steel and precision manufacture, CGC gives you a rugged 2-piece 100 lb. propane capacity cylinder of maximum strength and safety that will meet the most exacting requirements for many years to come. And with these advantages wherever you are... Maine, Louisiana, Montana... CGC delivered prices are competitive.

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Wirtham Bldg., 3102 Troost St., Kansas City, Mo.

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### **Cities Service Oil Co.**

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A DEPENDABLE SOURCE  
UNIFORM PRODUCTS  
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TWENTY YEARS' EXPERIENCE

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### **IN LP GAS ALSO**

CITIES SERVICE  
MEANS  
GOOD SERVICE

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### **CITIES SERVICE OIL CO. (Del.)**

•

BARTLESVILLE, OKLA.  
CHICAGO, ILL.

Other Sales Offices

Cleveland  
St. Paul

Kansas City  
Toronto

motional activities for "Saf-Aire" wall furnaces and "South Wind" wall or furnace-type zone heating systems.

Plans to consolidate the manufacture of all "Magic Chef" domestic gas ranges in one factory in St. Louis were announced recently by Arthur Stockstrom, president of American Stove Co.

Up to now the company has produced them in St. Louis, Cleveland, and Harvey, Illinois. The consolidation is expected to result in increased manufacturing efficiency, according to Mr. Stockstrom, who says there will be greater standardization of parts, better use of mass production techniques, and lower administrative costs.

The company's St. Louis factory at 2001 S. Kingshighway has been doubled in size since the war and now has about three times its prewar productive capacity.

Ray B. Fannin, formerly independent wholesaler of butane and propane equipment in Denver and Phoenix, Ariz., has joined the staff of Eaton Metal Products Co., of Denver, Colo., in the capacity of sales manager of LP-Gas equipment.

Lon D. Turner, former manager of LP-Gas sales has become manager of the "Gasair" Division of Eaton and will spend his entire time in the development, promotion and sales of "Gasair" machines.

At the annual meeting of stockholders of the Coleman Co., Inc., Wichita, W. C. Coleman, president of the company, accepted the resignation of John H. Graham, Coleman board member.

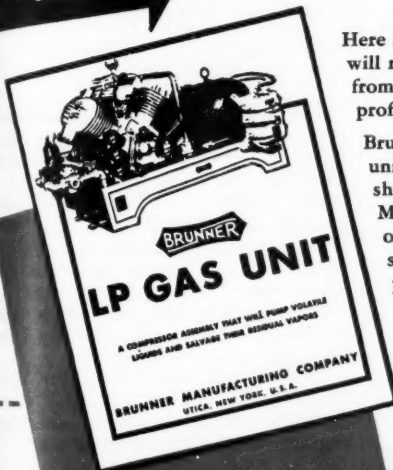
Mr. Graham has retired after 38

**500 TO  
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SAVED  
from every car  
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**BRUNNER**  
SINCE 1906

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Patent Pending

Vise holds cylinders securely during valving operations. Accommodates long or short cylinders from 10 in. to 15 in. diameter. All steel construction. Height—40 in. Width—18½ in. Weight—48 lbs. NOTE: Specify size of cylinders to be handled when ordering.

Write for Mutual's New 1949 Catalog



**Mutual**

**LIQUID GAS EQUIPMENT CO., Inc.**

3600 W. Imperial Highway, Inglewood, Calif.

years as an executive of the company. He was the company's first sales and advertising manager and was instrumental in founding Coleman branches in Los Angeles and Honolulu. He was general manager of the company from 1938 to 1940 and a vice president until his resignation.

Boyd W. Tullis, chief design engineer of the small appliance division, was elected to the vacancy created by Mr. Graham's resignation. Mr. Tullis joined the company as a test engineer in 1917. He was manager of the Coleman factory in Toronto, Canada, from 1920 to 1926 and since that time has been chief design engineer.

The appointment of Frederick Boehm as chief engineer has been recently announced by Schutte and Koerting Co., Philadelphia, Pa.

Mr. Boehm, who joined the company in 1930, served as head of the jet and meter departments of Schutte and Koerting prior to his appointment.

The company also announces that Frederick L. Seibold has recently been appointed sales manager.

Prior to his appointment, Mr. Seibold, who has been with the company for 28 years, served as sales engineer in the Philadelphia area.

Richard J. Seltzer has been appointed production manager for all plants of the Bryant Heater Division, Affiliated Gas Equipment, Inc., it has been announced in Cleveland by Lyle C. Harvey, general manager.

Bryant Heater Division of A.G.E., Inc. operates two factories in Cleveland and one in Tyler, Texas, for the manufacture of gas-fired hot water and heating equipment.

# HANDBOOK BUTANE-PROPANE GASES

REVISED JUNE, 1947

- Up-to-date technical facts on LP-Gases.
- 352 Pages. Illustrated with Charts, Diagrams and Photographs.



**Check this partial list of contents.**

## INTRODUCTION

The Progress of the Industry and the History of its Development.  
The ABC of LP-Gas, an Introduction to LP-Gas Operations.

## PHYSICAL AND CHEMICAL PROPERTIES

Properties of the Hydrocarbons in LP-Gas.  
Properties of Butane-Propane Mixtures  
Volume Correction Factors  
Analytical Determination and Testing

## PRODUCTION OF LP-GAS

Natural Gasoline Plants, Recycling Plants, Oil Refineries

## TRANSPORTATION AND STORAGE

Delivery by Truck, Rail, Water, and Pipe Lines  
Storage Tank & Pressure Vessel Design  
Liquid Metering and Pumping Systems

## UTILIZATION OF LP-GAS

Comparative Performance with other Fuels  
Appliance Installation and Testing  
Domestic Applications  
Commercial Applications  
Industrial Applications  
Enrichment, Peak Load and Standby Uses  
A Fuel for Internal Combustion Engines

## DISTRIBUTION OF LP-GAS

Installing and Servicing LP-Gas Systems  
Semi-Bulk Systems  
Bottled Gas Systems  
Gas Utility Service from Central Plants  
Multiple Utility Service from a Central Plant

## REGULATIONS

N.B.F.U. Pamphlet No. 58 (1947).  
Motor Carrier Regulations  
Freight Regulations  
Unloading Tank Cars  
Marine Regulations

## APPENDIX

Products Liability Insurance  
Handy Tables for Field Use  
The Interchangeability of Other Fuel Gases with Natural Gases  
Flame Weeding  
Bibliography  
Glossary of Terms

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"Plenty to cook, plenty to eat," says Indian brave, "but no fire!" Yet, beneath them was enough petroleum (LP-Gas, too) to have cooked all the food they, and generations to come, required. They were just not quite ready for it. Are we?

### THIS IS OUR "MEAT"

The solution lies in BETTER UNDERSTANDING and, PRACTICES. Therefore, GREATER ACCEPTANCE and SALES of LP-Gas.

NATIONAL is successfully training many NEW MEN for these responsibilities, as well as an increasing number of employed men.

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GORDON WALKER

Gordon F. Walker has been assigned to represent the Milwaukee Gas Specialty Co. in the Eastern territory, with headquarters at Philadelphia, it is announced by John A. Wolff, sales manager of the company.

Mr. Walker's territory includes the states of Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, and North and South Carolina.

El Roy L. Payne has announced the formation of two new companies of importance to the gas appliance industry in California. The E. L. Payne Heating Co. has purchased the assets of the Payne Beverly Hills retail department from Affiliated Gas Equipment, Inc. The new retail company will operate a trained staff of gas heating designers, installers and servicemen for all types of heating equipment in the Beverly Hills and Los Angeles metropolitan area, with headquarters at 9242 Beverly Blvd., Beverly Hills, Calif.

The second company will be known as the Beverly Heating Supply Co., operating from the same address, and will act as distributors and wholesalers of all types of gas burning equipment, with warehouse facilities, and will distribute to heating contractors and dealers throughout the state of California.

Mr. Payne is one of the pioneers in the gas heating industry. Entering the industry in 1914, he de-



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veloped the unit gas furnace and became the largest manufacturer of this type appliance in the United States. His company was purchased in 1945 by Dresser Industries.



ROBT. SEXMITH

This change in the distribution of Ansul fire extinguishing equipment

By mutual agreement Ansul Chemical Co., of Marinette, Wis., will offer sales and service for Ansul dry chemical fire extinguishers in the Pacific Coast states, formerly served by Snowden Chemical Co., of Modesto, Calif.

was effective June 16. Ansul has opened West Coast offices in Los Angeles, Fresno and Oakland.

Robert E. Sexmith, a veteran fire protection expert, has been named West Coast manager, fire extinguisher division. Mr. Sexmith will be located in Los Angeles.

In a deal consummated June 24, Perfection Stove Co. acquired the patents and trade names of the "Acorn" and "Oriole" range lines, manufactured by Standard Gas Equipment Corp., of Baltimore, Md., along with certain other physical assets of the Baltimore company.

Included in the purchase is the exclusive right to manufacture and market Oriole and Acorn gas ranges.

Tools, dies, jigs and molds acquired in the deal will immediately be ship-

**EXTRA!**



**GAS EQUIPMENT CO., DALLAS**  
**NOW DISTRIBUTORS FOR THE**  
**Rochester CRITERION**  
*Guaranteed Accuracy*  
**L-P GAS GAUGES**  
**LIQUID LEVEL GAUGES**  
**& THERMOMETERS**

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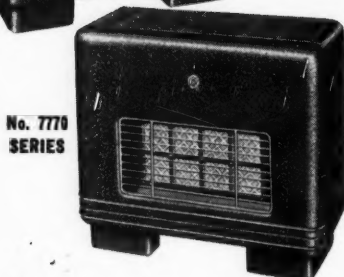


# VENTED CIRCULATORS

by  
*Peerless*



No. 7700  
SERIES



No. 7770  
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*Write for descriptive catalog today. Sold through better distributors everywhere.*

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**MANUFACTURING CORPORATION**

LOUISVILLE, KENTUCKY

ped to Cleveland and manufacture of the Oriole and Acorn lines will be undertaken within the next 30 days. Perfection has promised that customers of Standard Gas Equipment Co. will be served with only a minimum of delay.

Acquisition of the Acorn and Oriole lines gives Perfection 20 additional gas models, including CP and apartment-size gas ranges. These, however, will not affect work now being carried out on similar models which will carry the Perfection name plate.

Along with Perfection's own gas and kerosene ranges, cook stoves, the Acorn and Oriole ranges will be manufactured in the company's newly-expanded Ivanhoe Road plant in Cleveland, Ohio.



RAY A. REED

Ray A. Reed has been appointed by Surface Combustion Corp., Toledo, Ohio, as a district salesman in the Minneapolis territory, specializing on the sales and servicing of "Janitrol" heating equipment,

according to a recent announcement by C. B. Phillips, vice president in charge of sales.

Mr. Reed has been engaged in sales work in Minneapolis. He holds a commission in the Air Force Reserve.

The appointment of George M. Frazer as market analyst for the Janitrol space heating equipment division of the company is also announced.

Mr. Frazer is conducting market surveys on domestic and commercial

# Range Prospects Pick Premier

## The New A-D-38 Gas Range

There's profit in PREMIER when you feature this new range especially designed for your market. It's a big 38-inch range with large oven, drawer-type smokeless broiler, roomy storage compartment and service drawer. Furnished with four efficient cast iron burners, Robertshaw heat control and Fiberglass insulation.



A.G.A. approved for use with L.P., natural and manufactured gases.



MANUFACTURERS OF COOKING AND HEATING EQUIPMENT SINCE 1912.

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STREET

CITY

ZONE

STATE

AUGUST — 1949

165

L-P GAS MEN KNOW it's  
**RECTORSEAL # 2**  
 for "LEAK PROOF" CONNECTIONS



RECTORSEAL #2 is the favorite for "Leakproofing" the LP-Gas Industry because it retains its inherent plastic elasticity for the life of the connection. It doesn't freeze connections . . . never sets hard or brittle.

RECTORSEAL #2 has two consistencies: (1) Thin, in the can for ECONOMY and easy use. (2) Thick, in the joint for MAXIMUM sealing.

LP-Gasmen use RECTORSEAL #2 because they know it prevents danger . . . saves later trouble and saves money. They know that the complete range of brush-top can sizes makes Rectorseal #2 easier to use . . . assures the proper amount for each connection . . . prevents waste.

Available in pints, 1/2 pints and 1/4 pints. Ask your jobber for Rectorseal No. 2 in the size you prefer. If he doesn't have it, write us direct and give us his name and address. Your order will be promptly filled.

Write RECTORSEAL, Dept. A  
 2215 Commerce St., Houston 2, Texas

**RECTORSEAL # 2**

MAKING THE L-P GAS INDUSTRY SAFER

space heating equipment in various strategic cities throughout the country. The standard furnace division of Surface Combustion announces the appointment of Berton M. Sharpe as sales engineer to cover the territory of southern Indiana, southwestern Ohio and northern Kentucky.



DAN QUAIL

Stampings, Inc., manufacturers of bottled gas housings, with headquarters in Davenport, Iowa, has recently established a branch office in New York City.

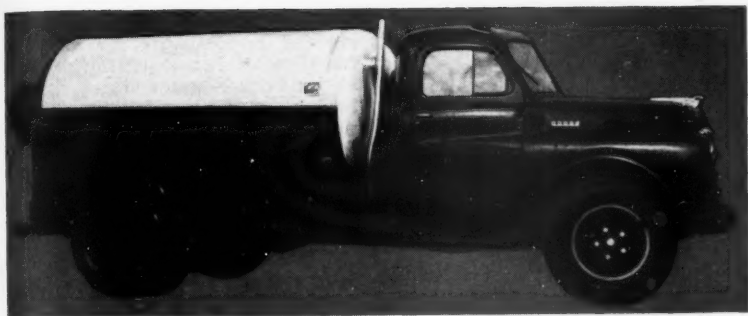
Dan Quail who has been Stampings' representative on the Eastern Seaboard for the past several years is in charge of the New York office at 525 Fifth Ave.

Increased business from eastern operators in the bottled gas industry called for the establishment of a permanent Stampings office in New York to better serve that territory.

George S. Jones, Jr., who has been vice president in charge of sales at Servel, Inc., since 1936 was recently named vice president and assistant to the president, according to Louis Ruthenburg, president of Servel.

Mr. Jones in his new position will serve in an advisory capacity with respect to sales and other functions of the business.

John K. Knighton, who has been assistant vice president in charge of sales and general sales manager for more than six months, will become general sales manager, reporting di-



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Propane Systems—57, 123, 317, 485, 955 gallon

Butane Systems—285, 500, 1,000 gallon

*Underwriters' Listed, Aboveground and Underground*

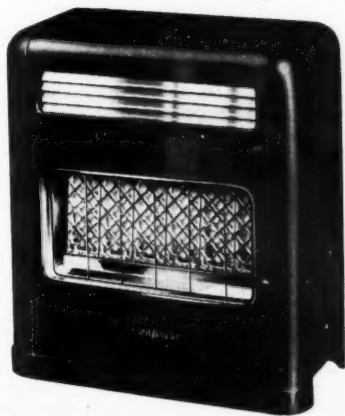
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## Steady Heat for Customers . . . Steady PROFIT for YOU!



### ENTERPRISE

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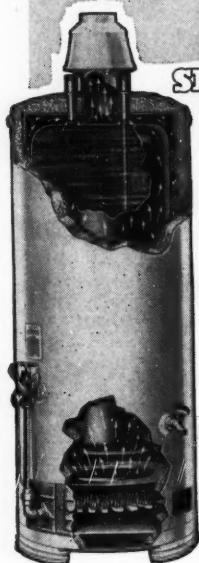
- 20,000 to 60,000 BTU Ratings
- Burners especially designed for LP Gas
- Vented or Unvented Models—automatic controls available on Vented Heaters
- Full vitreous porcelain finish (no synthetic lacquers used)
- AGA approved

There is a model for every customer—and a profit in each for you. Write for catalog sheets, specifications, and prices.

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**INSIDE and OUT**



**SECURITY**

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**COMPLETELY  
AUTOMATIC**  
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**UNDERFIRED**  
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**FIBERGLAS  
INSULATED**  
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**ECONOMICAL  
OPERATION**  
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**LONG LIFE**

Yes . . . and it's that Security Quality that has made so many water heater prospects SECURITY owners! Finest materials and skilled workmanship mean dependable performance. These big HEAVY DUTY heaters are smartly styled. And thousands of owners are amazed at their efficiency, economy and long life.

Built to burn ALL GASES. Now is the time to assure yourself a steady . . . and satisfied . . . flow of customers. Build your sales on SECURITY . . . and profit!

**SECURITY MFG. CO.**  
1630-48 Oakland Ave., Kansas City 3, Mo.

**SECURITY**  
**HEAVY-DUTY**  
**WATER**  
**HEATERS**



rectly to the management and assuming full responsibility for all sales functions of household refrigerator, air conditioner, water heater and export sales, sales promotion, advertising and sales research.

Mr. Knighton has announced some personnel changes in Servel's sales department.

O. F. Keune, who has been regional manager in the Southeastern area, has been named assistant general sales manager for the company with direct responsibility for field sales activity.

H. M. Wickman, who has been sales manager of Servel's household refrigeration division, has been named assistant general sales manager on special assignment. Mr. Wickman will give special emphasis to Servel's liquefied petroleum gas appliance sales program.

He also announced the consolidation of service departments. Under J. C. Kellner, Jr., this new department will be known as the appliance service department. Emil Nensel formerly manager of the water heater service department will be assistant manager of the appliance service department.

L. D. Eastmead, who has been the company's district manager in Georgia, Alabama and Tennessee, has succeeded O. F. Keune as regional manager in the Southeastern area. R. G. Williamson, formerly a dealer manager in the state of Florida for Servel, has been named district manager for Georgia, Alabama and Tennessee.

Arrangements for combined national distribution of the two types of gas-fired domestic heating units produced by the South Wind division of Stewart-Warner Corp. have been announced by H. W. Milner, domestic heating equipment sales manager.

The two units will be handled by

# Butane & Propane

# E

Producers of high quality  
Liquefied Petroleum Gases Since 1931  
Wholesale Only

**THE CARTER OIL COMPANY**  
T U L S A , O K L A H O M A



## FLASH!

We are now Southern Distributors... with complete warehouse stocks for immediate deliveries of

*Rochester*

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ENGINEERED INSTRUMENTS

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**LIQUID LEVEL GAUGES & THERMOMETERS**

Manufacturers of Fine Gauges for 34 Years

**REGO**  
LP GAS EQUIPMENT

**Aeroquip**  
INDUSTRIAL HOSE

**1cc cylinders**



**GAS EQUIPMENT SUPPLY CO.**

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ATLANTA, GA.

AUGUST — 1949

169



Viking Rotary Pumps are no sideline business. They are no fill-in. Making Viking Rotary Pumps is our one and only job. That is why you get so much from a Viking Pump.

It's an exclusive Viking product . . . in design . . . in production . . . in service. Every effort is extended toward the betterment of this one product. Every design is based on a "gear-within-a-gear—2 moving parts" principle. All production is concentrated on this one style pump. Service is simplified by the same means.

*Discover for yourself this outstanding rotary pump. Write today for free folder*

*Bulletin Series 2300B. It will be sent to you by return mail.*



**VIKING**  
PUMP COMPANY  
Cedar Falls, Iowa

10 factory representatives, plus two factory branch sales offices, at Dallas and Los Angeles, Mr. Milner states. Sales will be through jobbers serving the heating and plumbing trades and dealers who are equipped to render full installation and maintenance service.

The units are the two sizes of Saf-Aire wall furnace which has had national distribution for approximately two years, and the South Wind wall and furnace-type zone heating system heretofore marketed only in California and Texas because of gas shortages elsewhere in the country. The "Saf-Aire" is a room heater while the "South Wind" is capable of heating up to two and a half rooms.

Effective immediately, the Hall-Scott Motor Division of ACF-Brill Motors Co. announces the appointment of Fred T. Cushing as Eastern sales manager, with headquarters at Philadelphia. Mr. Cushing will supervise Hall-Scott engine activities east of the Rocky Mountains and work with the varied users of Hall-Scott engines in industrial service, power stations, oil field equipment, marine, truck and special equipment.

Mr. Cushing has been associated with Hall-Scott for some years as sales engineer.

C. J. Bender, Trinity Steel Co., Dallas, has appointed Edwin K. Jenkins, Wichita, Kan., field representative for the company for the states of Kansas, Nebraska and Colorado.

Mr. Jenkins formerly handled refrigeration equipment and is well known to the LP-Gas trade. He will sell for Trinity the line of "Eveready" gas systems, storage tanks and truck tanks. His headquarters are maintained in Wichita.